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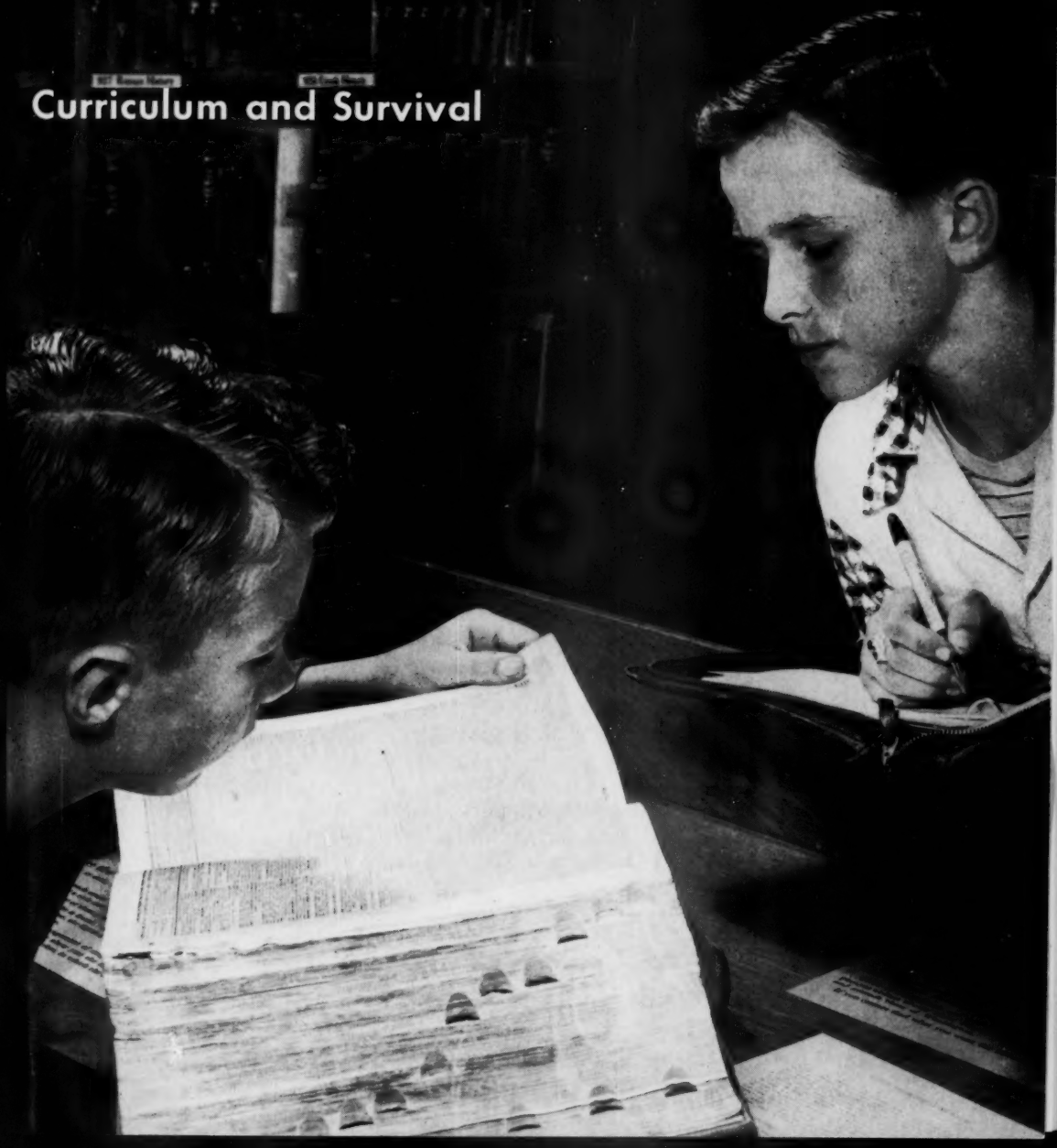
Curriculum and Survival



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Editorial

Developing Our Full Human Potential

THE curriculum has been discovered by the American people. Different groups and individuals may have conflicting opinions as to what should be emphasized in education, but there is no mistaking the importance attached to what we do and do not do in our schools and colleges. On one side our survival is seen to depend on stepped-up production of scientists and mathematicians; on the other we are told that we shall be lost unless every elementary school child learns a foreign language. But every curriculum proposal in newspaper column or television program carries the tacit acknowledgment that education has power.

We can be gratified by this condition and at the same time awed by the responsibility it carries. It is our task to determine the kind of curriculum most likely to guarantee survival. The kind of survival in which we are interested is not merely an escape from being wiped out by a nuclear weapon but a chance to continue as a free, creative, proud people.

This first issue of EDUCATIONAL LEADERSHIP in the fateful Fall of 1958 is dedicated to an exploration of the meaning of *curriculum for survival as a democracy.* Given the seriousness of the troubled times we are in, nothing less than the development of our full human potential will save us. Given our commitment to democracy, the development of our human potential must be guided by certain purposes and values, else *we* shall not really have survived after all.

A common way of viewing the phrase "developing our full human potential" is to think of individuals prepared in sufficient numbers to fill the various specialized roles on which a modern industrial society depends. For example, there is an obvious need for the various kinds of specialists required to maintain and advance our complex technology. Production and invention would soon lag without research scientists to create new knowledge and without technicians capable of translating findings into useful processes. We recognize the need for other types of specialization also—the need for individuals skilled in distributing consumer goods and services, in helping their fellow men secure justice before the law, in discovering new cures for disease, in mapping urban development, in adding beauty and meaning to living, in teaching how to do these things and more. We also recognize the complexity of the problem of providing enough individuals with the right kinds of skill and understanding to fill our ever-changing manpower needs.

This is a large enough order, it would seem, but still it is not the whole job. Not only must we think of a total population possessing among its individual members the necessary skills for manning the various operations of the society, but our democratic values dictate that we consider the development of the full potential of *each individual.* Is he becoming well educated, well so-

cialized, and highly fulfilled as a person? It is not enough to secure all the physicians, chemists, teachers, garage mechanics, and nuclear physicists we need. Each of these and every other member of our society has a right to be a fully functioning person, enjoying the exercise of his unique, creative powers and sharing in the common joys, concerns and loyalties of other human beings.

We cannot afford experts in science who are not informed and concerned about the social implications of their productivity. We cannot afford political leaders who know only the art of the possible and have a cynical disregard for what ought to be. We cannot afford factory workers who do not know how to participate effectively in organizations intended to represent them. We cannot afford clerks or housewives or salesmen who do not know what it is to feel important.

In our attempts to develop our precious human resources, we sometimes go astray. In our zeal to meet a sudden need for certain specialized manpower, we may engage in talent searches in one specific area and may endow our discoveries with handsome scholarships, failing to consider what this may do to the prestige of other useful lines of work. Again, there may be a cry that the gifted are being neglected and we set up preferred treatment for a handful of arbitrarily selected young people, ignoring the fact that we are thus creating a large pool of "ungifted." We hear that a rival nation has a "tougher" curriculum than we do and there arises a clamor to require more courses, lengthen the school day and pile more homework *on someone else's children.* In such cases we seem willing to go a considerable distance toward using our resources as tools to serve our common purposes, although seldom does anyone go so far as to propose that the individual should be compelled by the state to enter a certain vocation.

We have failed to develop our human potential for quite another reason also—our need to know more about the role of motivation. We need to understand more about the self-concept in relation to young people's use of educational opportunities in elementary school, secondary school and college, in relation to their general aspiration levels, and to their vocational choices.

Third, we as individuals and as a people have failed to become all we might become because we still have much to learn about the type of education that will help each individual to realize his potential in ways satisfying and useful to him as a member of his society. What might our human resources be like if we were to act on the principle that *all* persons have gifts worth cultivating?

If we are to provide learning opportunities in schools and colleges that will help us to survive as a democracy, we are required to make careful continuing studies of manpower needs; we are challenged to discover types of educational programs which develop the full scope of powers in all kinds of children and youth; and we are committed to help these young people make wise choices of specialization. Democracy's not-so-secret weapon is its view of the importance of people as resources which grow richer as individuals become what they need and want to become. Here indeed is a call for educational leadership this year and next.

—ALICE MIEL, *professor of education, Teachers College, Columbia University, New York; and chairman, ASCD Publications Committee.*

WILLARD B. SPALDING

Satellites, Rockets, Missiles: Their Meaning for Education

The inquiring mind is democratic man's best defense against the forces of cruelty and coercion.

SATELLITES, rockets and missiles have more meaning for American education than either one person or a group can explore in a single article. As Robert Frost once said, "There is no time when I talk or when you talk that we ought not to introduce ourselves with the expression, 'I make bold to say.'" [1]

So, following Frost's advice, I make bold to say that recently dramatized advances into space present American education with new evidence that it must renew and expand its efforts to teach students to strengthen, deepen and broaden their questing. Graduates of our schools, more than ever before, should learn to seek new answers to both old and new problems, to "do their damnedest with their minds, no holds barred."

The Questing Intellect

The questing spirit, the curious intellect, the inquiring mind, label it how you will, is among man's most precious attributes, distinguishing him from the animals and setting him just below the gods. With it, he has produced both the giant machines and the intricate satellites which they carry into space. But what else has he produced at the same time? As orbiting satellites become larger and larger, as space platforms and space ships are manufactured and propelled into their orbits, what will they take with them? Will they draw more and more of man's resources, material and intellectual, into their orbits? Will the demands and challenges of science so overpower art, literature and social sciences that man will lose his humaneness? If schools, misled by federal funds, divert undue proportions of their efforts toward the production of scientists, and so limit questing students to a few narrow experiences, may not man tend to lose many of his most lovable and loving qualities?

Questing students, as they develop, need experience in a variety of areas so that they may eventually select the most intriguing problems for a lifetime of activity. Some of the experiences of all students will be in science and mathematics, but awareness of need here should not lead schools to forget that each student deserves the opportunity to explore new relationships in the arts, the humanities, and the social sciences.

Freedom to provide opportunities for questing minds to investigate all that exists or takes place must extend throughout society, especially in the schools, if students are to learn to think to the best of their ability. Extending and

[1] Robert Frost. *A Talk to Students.* Commencement Address at Sarah Lawrence College, June 7, 1956. Distributed by the Fund for the Republic. Quoted by permission of Robert Frost.

prolonging freedom to be curious is as important to science as to the advancement of other fields of knowledge. Years ago, George Stoddard said, "The freedom the scientist demands in order to be productive and original is no inalienable right, for the simple reason that it cannot stand alone." [2]

Scientists are, perhaps, even more aware than are educators of the dangers of either limiting the areas about which man can inquire or of inducing men to inquire about only a few areas by rewarding scientific studies in such areas so munificently. Their concerns, and ours, are shared by few politicians and few of the military. And public policy seems more likely to be shaped by Congress and the Pentagon than by scientists and educators. The strange idea of raising a generation of captive scientists who may devote their lives to producing satellites, rockets and missiles apparently does not appear strange to those who now have the power to decide.

Slavery, even when produced by the silken bonds of perquisites, prestige and cash, is an ancient attribute of barbarism. Our culture, like all cultures which maintain military forces, includes strong barbaric elements. Democratic civilization, in which man is free to realize his fullest potentialities, and barbarism, in which man preys on man in the struggle for survival, are found side by side in the world today. But conflict between these opposing ways of life is inevitable; they cannot develop along parallel lines indefinitely. In the past barbarism has eventually arrested the development of civilization and ultimately destroyed it.

Egypt, Assyria, Sumeria, Greece, Carthage, Rome—all have fallen before the strength of the barbaric forces which they embraced, which were indeed part of the structure of their civilization. Today, we cultivate many forms of barbarism, to protect our existence: armies, guided missiles, nerve gases, hydrogen bombs, and captive scientists. The missile which carried Sputnik to the heights symbolizes the extent to which barbarism is already overtaking civilization.

And what remedies are proposed? "The countermeasure," as George Stoddard stated in the speech from which I quoted earlier, "is in itself monstrous—a life underground. Man is driven into the caves from which he emerged only a few thousand years ago, and he no longer feels at home there." [3]

Man's Victory

If the forces of barbarism continue to strengthen, as has occurred in all previous eras and all previous civilizations, the cost in carnage and waste can be beyond calculation. The holocaust of thermonuclear war, carried on by intercontinental missiles which strike without warning, will produce a desolate world. The Dark Ages of the future, if war comes, will make the Dark Ages of the past seem like a pleasant interlude.

The current press carries some stories which indicate increasing fear of war among men in every nation. Even our adversaries in the communist world seem aware that they would lose far more than they would gain, should armed conflict arise. True, with typical casuistry, they argue that killing with one kind of weapon is better than killing with some other kind. As a matter of fact, once man has decided to kill man, there are no subsequent moral issues in respect to killing.

[2] George D. Stoddard. *Frontiers in Education.* Stanford: Stanford University Press. 1945, p. 27.

[3] *Ibid.*, p. 27.

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Annually the John Dewey Society holds an open meeting on the eve of the ASCD Annual conference. Topics selected are timely and provocative for an audience made up of active participants in the ASCD who have arrived early for conference responsibilities. Texts of this article and the two following it were presented as major addresses at the John Dewey Society meeting, March 1, 1958, in Seattle, Washington. Already scheduled for the eve of the ASCD conference in Cincinnati, Ohio, on February 28, 1959 in honor of John Dewey's centennial is another challenging program: "John Dewey: Exponent of Intellectual Discipline." This will be the tenth annual meeting of the John Dewey Society at the ASCD conference.

Pounding his skull with a club, shooting him with an arrow, piercing him with a sword, smothering him with gas, burning him with a flame thrower, shattering him with a shell, disintegrating him with a hydrogen bomb—all are equally evil. American education, if it is to continue to produce questing minds, must also continue to help man learn to live with man. No more challenging problem confronts us than learning how to become safe from each other.

But, if questing minds are turned away from such great problems, either by restriction or seduction, the chances of the survival of our civilization are lessened. Here, with our great traditions of freedom, we must continue to oppose both restriction and seduction, whether in science or elsewhere. We must continue to strive for more and more free inquiry into more and more areas of human activity. As we do this, and as we teach the young to continue to expand both freedom of inquiry and the activities of questing minds we can again set an example for others to follow. A nation in which people have learned how to seek answers to their problems and in which seeking is freely done can provide the vision of a brave new world of peace.

And, with peace at hand, there will still be great problems to be solved before man has conquered himself. "A victory of man over himself will not be won easily, and perhaps not at all. There are divisive forces within families, cities, and nations almost as ruinous as international conflict. The dead may not be piled so high, but the psychologically wounded are innumerable. The world of phantasy reaches out; the means of escape are everywhere at hand. With the coming of peace we shall concentrate upon the appalling ravages of alcoholism, disease, drug addiction, delinquency, crime, neurosis and psychosis. We shall seek again the underlying causes of unhappiness, cruelty and aggression. We shall seek not alone antidotes but the positive means of growth and refreshment." [4]

Here are enough complex problems to take up all of the efforts of all of the inquiring minds that the schools can produce. Without these minds, they will remain unsolved for far longer than necessary. With these minds, solutions will come soon enough to enhance man's life in the reasonably near future.

The great challenge to American education in the years of satellites, rockets and missiles, the years which lie immediately before us, is to develop students who will want to know and who will seek knowledge wherever it is to be found, students who will say, as Robert Frost said, "I would rather think, have an idea myself, than have it given to me. . . . But the main thing is to think of it first myself." [5]

[4] *Ibid.*, p. 32-33.
[5] Robert Frost, *op. cit.*

FRED T. WILHELMS

Moons and Missiles and What To Do Now?

Three areas of concern to school people are intensified by the rush of today's events.

THIS article will turn the spotlight on three areas that need intensive work. None of these has direct relationship to moons and missiles, except in the sense that each helps us to do the best job we can do. My feelings about our emergency are deeply serious. As a patriotic man who sees his world trembling on the edge, I wish we could rush to the rescue with immediate aid. But we must resist the urge to gamble on impulsive shortcuts. Our task is to stay steady, work harder, and get better at our jobs. We are in the position of the surgeon who said of an operation in which a large artery might be cut, "The patient will bleed to death in twenty seconds; you can tie it off in less time than that *if you don't hurry.*"

Special Areas and the Gifted

I shall not mention the science-math drive; I agree that it is essential; but I believe it is already going forward. Neither shall I mention the great upwelling of public feeling that we should bring our students to work harder and more soberly; I agree with that too. I simply choose to treat three other areas of need and promise.

One lasting measure of our size, as educators, will be whether we can genuinely see this troubled time as a period of crisis—or merely as a period of criticism. The test is a harsh one. For we schoolmen are being battered until our bones feel bruised. We are not merely being challenged on technical grounds, where surely we have made many errors and need corrective criticism. We are being made to look stupid and silly. In short, we are being smeared.

And yet I believe it best that we resolve to study the criticisms with all sincerity, to get all the guidance we can, toward better serving the American people.

Not that we should accept all the blame being thrown at us, or even take all the criticism at face value. I do not propose to bear the guilt that belongs to our political and administrative leaders. If they were frightened by a circling dog just as they were nobly summoning the courage to charge us four cents for a postage stamp, let them have the guts to own their fault. They had had their fun jeering at research "to find out why the grass is green." They were the ones who saw our economy so small that adequate defense expenditures would bring on a depression that would "make our hair curl"—and who saw our people so small that they could not be asked to pitch in. The teen-agers coined an expression for it—"chicken out."

Nor were the leaders alone in their guilt. Let all adult Americans, suddenly critical of our output of the scholarly, face the bill for the fun they have had with the "egghead" and the "longhair." Let them review their hedonism, their clutching at every luxury and softness of life, before they deride their own children for want of austerity.

In our sincere effort to use criticism as guide, duty compels us to study precisely what is being proposed. The overwhelming concern for the gifted: What part of this concern is genuine desire—which we share—to bring our finest human resources to full fruition? What part grows out of yearning, perhaps unconscious, for the old aristocratic order of special privilege for an elite, mixed with a veiled contempt for the ordinary? Concern for the able does not have to mean contempt for the others, but I think I hear the two coupled so often that I soberly advise all educators and all parents to scrutinize the blueprints of the system we are asked to build.

We shall be derelict in our duty, too, if we turn our backs on our hard-earned expertness and the results of our scholarship. The panacea boys owe us some library work before they demand that we accept their easy advice. They seem, for example, to be telling us to go back to massive retardation of those who do not "meet the standards." Let them look at the record. Let them read even just one old book, Ayres' *Laggards in Our Schools,* and see what they think of that sad device, discredited on every count by a half-century of dismal experience. They seem to advise, too, that crude ability grouping will release the able to zoom up, jet-propelled. Let them study the research of the 20's and 30's and get a more realistic notion on the price of jets.

We are not going to serve the public well by treating every half-baked "cure" as if it were a stroke of insight. We have a right to respect by the public. And the way to get it is to start from the calm self-respect that we have earned.

How shall we use criticism, then? First, we should enjoy to the full that at long last the American people are taking us seriously. Then, we should take *them* seriously. They are good, intelligent men and women, rightly fearful of our country's future, rightly concerned for their children's best development. Let us settle down to help them get equipped to make the hard choices they have to make.

I don't mean talk them over to our point of view. I don't mean just help them "meet" the criticisms. Let's face it: Every single area of public worry about the school *is* representative of a great, persisting problem that we've worried with too, but haven't solved. Their diagnosis may be crude, their easy answers may be naive or even disastrous, they may be lashing out in baffled hostility rooted in a thousand mixtures of motives —but their fundamental intuitions are sound.

Well, let's start from there. Let's take a new tack. Let's simply admit that the problem exists; in some cases, maybe, show them that the problem is much more serious than they suspect. Let's explore it with them just as fully as we can, adding together their perceptions and ours.

Then let's start looking with them at possible solutions. Let's keep the "s" on that word, solutions—not just tell them what *our* solution is, and try to "sell" it. The thing to do is to explore all the possible answers, frankly and with good

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will, assessing the probable costs and effects of each as objectively as we can. These are *adults;* adults with a perfect right to be in on the secret, to contribute, to call the final shot. We don't need them for a captive audience; we need them for intelligent partners. The trouble is that too many of them "know the answers" in comparison to the number who know the questions. And that's pretty much our fault, because we've been trying a shortcut that wasn't there.

Name any educational problem you care to; name any area in which a frustrated public is threatening to jettison what you and I hold dear. I am willing to bet that if we will stop just being defensive, just trying to persuade them to our conclusions, if we will go back with them to the roots of the problem, get them data to think with, we shall find them sober enough and intelligent enough so that we can trust their solutions—which may not be ours, but which may just possibly be better than ours.

Liberal Education for Teachers

A second area of concentration that I recommend is my own field of teacher education. It hasn't ever been a howling success. Historically it has been dull, repetitious, and banal. Worst of all it simply hasn't made its message stick, hasn't established the behavior patterns it went after. Our students have been telling us this for a long time as, violating every principle of our own preachments, we have tried to stuff them with a lot of theory and philosopy they just didn't have the apperceptive basis to learn. Whether we wholly like the Ford Foundation's program or not, we may as well admit that they caught us napping.

In the popular mind and on many a campus the problem gets crudely interpreted as how much time to put into subject matter background as against professional education. By and large, this is a poor issue. *Of course,* we in professional education should be helping our liberal arts colleagues to get more time with our teachers—more than they even dare to want. The general line right now is that if they could have the student uninterruptedly through four college years, all would be well. Well, I happen to work in a state where secondary teachers get just that—oh, we borrow a few units from the subject matter areas in the senior year, but we pay back at least that many units in the fifth year. At my college a high proportion of both elementary and secondary candidates have college degrees from fine universities before they take even one hour of education.

And so I have to raise a quiet, impertinent question: Can our liberal arts colleagues deliver us the liberally educated men and women they talk so much about, competent in their subject fields? My observation says, "No." As I look at these graduates, I think I see for the most part young people who have had a considerable amount of what has traditionally been labeled the liberal arts—and by some semantic sleight of hand got equated with a liberal education. But by any functional definition of a liberally educated person, I don't think they measure up. To put it bluntly, I don't see much that is liberal about much that is called liberal education. I see little evidence that the liberal arts faculties have taken the wonderful vision of the liberally educated person as their goal, pondered what it means, and been willing to reach beyond mere technical instruction in a group of respectable disciplines.

Even as to sheer subject matter competence, I am dubious. It seems to me our graduates are competent enough in their fields to go on teaching them in

about the way they were taught. But I see little of that comfortable mastery that frees a person confidently to pick and choose, resynthesize, bring insights to bear creatively in new settings.

What do I want us to do, then? Two things: First, find ways of helping our colleagues develop a truly liberal education. Second, help them get more time. I believe that for high school teachers we should be moving rapidly to at least the Master's degree level in the subject matter fields. I know that people will say this is too expensive, that we already have a shortage, etc. Well, the poorer nations of Europe have been affording this—and more—for quite a while. I think we had better just size up what it takes to do a good job and then go after it.

But that's a bit of a detour. I started this diatribe on the *professional* side of teacher education. Here my antennae are quivering at some preliminary evidence. I believe we can build a program that will be challenging every step of the way, that will be economical in time taken, and that will help the learnings stick and transfer into real practice. Of course I can't presume to prescribe what still has to emerge out of a great deal of trial and study. But I am pretty certain that the program will be rooted down in a progression of real experiences, little and big, intricately interwoven with intellectualizing background. Timing is going to have to be very nice. But if we bring it off, a wonderful thing is going to happen. The methodology and psychology and principles—all the stuff we have tried so hard to push down against apathy and sheer incapacity—are going to be sought after eagerly and fall into place naturally because they are going to get into the problem-solving role. And what is learned is going to stick in action because it was learned in action.

We've been slowly drifting this way for quite a while. I recommend that we consciously get to it.

Significant Work for the Young

The third target on which I'd like to concentrate your mental firepower is, in terms of subject matter, most related to the social studies, though it is bigger than that. I don't know at all precisely what I'm trying to describe. Let me come into it sidewise.

Any serious educator must be dismayed as he reads of the rising tide of youthful delinquency and crime. I've tried hard to understand it, but I still don't. The old pattern was easy to see: from swiping apples off a fruit stand, to stealing hub caps for spending money, to more serious behavior—for a slum kid with time on his hands, the drift was all too easy; the wonder is that more did not fall into it.

That pattern still persists. But alongside it there seems to be growing another kind of drift; something a little weird, inexplicable—and ominous. The purposeless acts of brutality, the stealing by youngsters with plenty of money, the flashes of vandalism often aimed at recreation facilities provided for youth, the sudden eruptions of "nice" boys from good homes. You can fill in the details. I know these things don't involve a large proportion of youth, but there is a quality about them that haunts me. It is as if these youngsters have come loose from the society they live in, or view it with a smoldering resentment. *Why?*

But we don't need to take our data from the delinquent fraction. I've been trying to see the world through the eyes of the normal crowd—and a very superior generation I think they are. Look at a couple of snapshots with me. The other day a six-year-old sweetheart of

mine noticed a two-year-old wandering disconsolate, lost. She knelt down by him, soothed him, somehow found out where he lived, and led him home—and then she was glowingly happy the rest of the day. For several years the San Francisco Youth Association has canvassed hospitals and social agencies each spring to find out what teen-age volunteer help they could use through the summer. Then we don't do a thing but post job descriptions in the high schools, along with the phone number of the Volunteer Bureau. Every spring volunteers by the hundreds take the initiative—far more of them than the agencies can use—and work hard through their vacation months.

I wonder whether any other culture has even been so maladroit as we are in using that kind of motivation. Our children want to be big and we keep them little. They behave irresponsibly precisely because they don't have any responsibility. And when we worry about their behavior, the best thing we can think to do is to provide recreation for big boys and girls who would be far better off—and happier—providing it themselves for smaller children. If I read our young people right they are crying for significance—the kind of significance I had as a thirteen-year-old when another farm boy and I did the work of "one man."

Well, maybe that's enough of my amateur diagnostics. I don't have any sure solutions. I *am* sure there are a lot of powerful young motors idling, and when they roar into action we almost force them to waste their power on irrelevancies or worse. I am pretty sure that a lot of even our best youngsters are wandering detached in our order, not really involved, not really able to be soberly in earnest because there is so little for them to be earnest about, except a vague future.

As we try to build maximum national strength for a long, hard time ahead, it seems to me our great need is genuinely to incorporate these young people into our society, as the big people they want to be, as contributors, as active agents. I think this is the need—far more than simply to push them into studying harder.

How to do it? I don't have pat answers. What scares me is that we try so little. We make a pass here and there at work experience—and it looks promising—and then we usually let it die. If we really tried, almost any number of possibilities might open up.

Knowing full well the inadequacy of my next point, I want to suggest that *at least* we build a social studies program with some insides to it. Tough-mindedness, the ring of authenticity. For every physics lab, let's have some rigorous laboratory work in the democracy around us. The great, persisting problems of all mankind, the problems men have never wholly solved—these deserve better than to be fodder for loose-jawed, indolent, unearned generalizations. Precipitated down to their local and immediate forms, they can be skull-crackers for thoughtful reasoning based on multi-variable data of causes, costs and effects.

They are the best subject matter I know on which to learn the skills and habits of precise, shaded, critical thought. They hold a gold-mine full of opportunities for lively, serious first hand research. They are the chewiest stuff I know on which to work out and test a set of human values to live by. And students who have worked at the great problems in these ways will likely never again be so vulnerable to the easy answers, so disengaged from the everlasting human struggle upwards.

And the treatment need not be all cerebral. There is room for the rolled-up sleeves and dirty hands. The same San Francisco that cannot use all the teen-age volunteers who offer themselves is suffering a great shortage of day-care for the children of working mothers. The city needs to have all kinds of simple research studies done—I know because as soon as we got our college students into community analysis and service, we were flooded with requests to do neighborhood studies. I am sure that nothing would delight our youth so much, lift their self-respect so high, weave them into our going order so effectively as giving them the chance to do some real social service. It can be hard and menial and dirty—it only has to be real and significant.

Yet the social studies can't do it all. We can, however, plan social studies that will *help* include the youngsters in on the attacks we adults are making on our gravest problems. In adolescence especially they are at the most idealistic period of their lives; their energy is abundant; they yearn for adultness, and they are perfectly able to move swiftly into it. In this hour of our great need for strength, I can think of no gain greater than the one we shall capture if only we will let our young people join hands with us and work with us shoulder to shoulder.

Special Knowledge

• The value of culture is its effect on character. It avails nothing unless it ennobles and strengthens that. Its use is for life. Its aim is not beauty but goodness. Too often, as we know, it gives rise to self-complacency. Who has not seen the scholar's thin-lipped smile when he corrects a misquotation and the connoisseur's pained look when someone praises a picture he does not care for? There is no more merit in having read a thousand books than in having ploughed a thousand fields. There is not more merit in being able to attach a correct description to a picture than in being able to find out what is wrong with a stalled motorcar. In each case it is special knowledge. The stockbroker has his knowledge too and so has the artisan. It is a silly prejudice of the intellectual that his is the only one that counts. The True, the Good and the Beautiful are not the perquisites of those who have been to expensive schools, burrowed in libraries and frequented museums. The artist has no excuse when he uses others with condescension. He is a fool if he thinks his knowledge is more important than theirs and an oaf if he cannot comfortably meet them on an equal footing.

—W. Somerset Maugham in *The Summing Up*.[1]

[1] From: *The Summing Up* by W. Somerset Maugham. Copyright 1938 by W. Somerset Maugham. Reprinted by permission of Doubleday & Co., Inc.

PAUL DeH. HURD

Science Literacy: Its Meaning for American Schools

School people and public have come to realize that it is through the programs of the schools that science will be advanced and the ideals of a free world will be perpetuated.

WITH nuclear fission came the atomic age. Before America realized its significance, the transistor introduced the electronic age which in turn fathered automation. With a roar and a whistle the jet made "supersonic" a common term—and the world became smaller. Ballistic missiles circle the earth, a space age is born, and the size of our universe is diminished. The control of thermonuclear reactions will soon introduce a new power age.

Plastics and pesticides, biotics and detergents, silicones and synthetic elements have introduced the modern world of chemistry. Half of the chemicals in common use today were unknown 10 years ago. Tranquilizing drugs provide a research tool for studying the human mind; "tagged" molecules supply information about living cells, and developments in virus vaccines give promise of a disease-free world. Biophysics and biochemistry are bringing us closer and closer to understanding the nature of life.

These are the achievements of man about which thousands of valedictorians will orate at graduation, and rightly they should, because these events are the events of their lifetime. They will talk about discoveries in science and how man has increased his control over his physical and biological environment. They will discuss automation and the increase in leisure time, better health and a longer life. These are the words we hear from the first graduating classes of the "space age."

Even the casual observer recognizes that science with its applications in technology has become the most characteristic feature of modern society. Attempts to define human values, to understand the social, economic and political problems of our times, or to validate educational objectives without a consideration of modern science are unrealistic. More than a casual acquaintance with scientific forces and phenomena is essential for effective citizenship today. Science instruction can no longer be regarded as an intellectual luxury for the select few. If education is regarded as a sharing of the experiences of the culture, then science must have a significant place in the modern curriculum from the first through the twelfth grade.

What Kind of Education?

The American people, sparked by a Sputnik, and almost as a single voice, have inquired whether their children are

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receiving the kind of education that will enable them to cope with a society of expanding scientific and technological developments. There is a concern about the next generation's ability to continue the accelerated momentum of science. The question has been raised whether high school graduates even know the meaning of science.

We are approaching a period in history that will be distinguished by a great discontinuity in scientific and social development. The challenges to be faced will be more numerous than ever before. Will curriculum workers be able to devise the educational program necessary to maintain the delicate balance of scientific, social and economic forces that will be found in this period? Will it be possible to evolve the kind of education essential for continued scientific advancement within the framework of a free society? Can a philosophy of education be developed and a curriculum invented that will prepare young people for the approaching era of world industrialization?

In this period there will be a demand for intensive specialized training for an increasingly larger fraction of the population. Already the creative and the technical manpower shortages are problems of serious proportions. Can science education be modernized fast enough to meet these challenges without destroying the balance of educational experiences? These are the questions that satellites, rockets and missiles have focused in the American mind and these are the problems that educators are asked to help solve.

The crisis in education has both an immediate and a future aspect. The immediate problem is one of closing the gap between the wealth of scientific achievement and the poverty of scientific literacy in America. There is also the problem of developing a program of education suitable for the probabilities of the future. This requires an educational plan that prepares young people to expect change and to meet change without shock, fear and anxieties. Progress in science and technology has reached the place where their future is dependent upon an education that is appropriate for meeting the challenges of an emerging scientific revolution.

The problems facing American education are complex and urgent. They will not be solved by any simple process of "patching" or "retreading" the existing curriculum. The need is for a perspective of education compatible with the forces of science that are now shaping the ways of men. Furthermore, these forces are increasing both in tempo and magnitude. Breakthroughs in science lead to new horizons, and establish new areas for intellectual conquest which in turn demand a plan of education to sustain the cycle of achievement. An education of this nature must have built into it some of the dynamic qualities that have given us the "scientific age."

Public Interest in Schools

Schools find themselves in an unusual position today. The public has suddenly taken an overwhelming interest in education even to the point of demanding curriculum changes. The situation has been commented upon by the President and debated in Congress. While most of the attention has been directed toward improving science teaching, it is apparent that there is a strong movement for a "new look" at all American education.

Science has been a dominant factor in determining the beliefs of educated

men for the past 200 years, and the measure of human progress for the past century; it is the most distinguishing characteristic of modern society, and represents the best investment for the future of mankind. However, it is seldom possible to find any time consistently assigned for teaching science in the elementary school; few junior high schools offer a full program of science; and in the majority of high schools students are able to graduate with only a year's work in science. How does one explain why the greatest intellectual achievements of our time and the major forces which have shaped our culture shall have no more than incidental treatment in general education?

The demand to "do something" about science teaching in schools has resulted in considerable action. More than 50 national committees are actively engaged in efforts to improve the quality of the curriculum and instruction. Hundreds of scientists are giving help by suggesting experiences of greater potential significance for the development of scientific literacy in the young people of America —a professional responsibility they have too long neglected. One group of scientists has developed a new physics course for high schools. Others are working on the improvement of chemistry and biology laboratory experiments. The National Science Foundation has established thousands of fellowships to enable secondary teachers to broaden their background and to contemporize their knowledge of science. There are plans to extend these opportunities to elementary and junior high school teachers. Many professional organizations for scientists have reactivated their educational committees and have begun to encourage high school teachers to participate in their meetings.

Millions of dollars are being contributed by business and industry to provide scholarships and work opportunities for science students, and fellowships and summer jobs for science teachers. Some business-industry associations have taken the leadership in developing curriculum and guidance materials that are frequently superior to those ordinarily available to classroom teachers. Within the past two years nearly 200 colleges and universities have developed within their science departments special courses for the education of teachers. Over 125 bills have been introduced into Congress to improve the teaching of science in some manner. The entire situation is unique in educational history. Never has so much effort been expended to modify the content and teaching procedures of one phase of the curriculum.

The problems encountered in organizing a new program for the "space age" are not easy to resolve. There is a tremendous volume of scientific knowledge and concepts from which it is necessary to choose a small per cent to form the content of courses. Moreover, this fund of knowledge is increasing so rapidly that even the specialist becomes relatively more ignorant with each passing week. Authors of textbooks have sometimes endeavored to solve this problem by adding pages to the text or by touching lightly on more topics. As a result, the science curriculum has been spread so thin over so many topics that students acquire only dribbles and dabbles of assorted information. There is also the problem of building into the science curriculum some depth and quality of understanding. It is essential to select learning materials that are the most fertile in providing opportunities for using the methods of science. Further efforts are required to choose learning experiences that have a particular value for the development of an appreciation of

science as an intellectual achievement, as a procedure for exploration and discovery, and which illustrate the spirit of scientific endeavor. It will be most difficult to discard those sections in our courses which have been taught for so many years that they appear to be forever fundamental.

Frontiers of Discovery

Science courses need to be taught somewhere near the frontiers of discovery. Students should have opportunities to look through the doors of science and to be tantalized by the unknowns. How can a student develop the curiosity and the imaginative qualities of a researcher if he is never introduced to the probabilities of a trip to the moon, controlled thermonuclear reactions, mining the seas, artificial photosynthesis, psycho-chemotherapy, and the many other problems that challenge the minds of scientists today? These are areas in which students can visualize a future. The science curriculum must advance with the achievements of science and with some projections into the future.

Modernizing the courses does not mean that the history of science is to be neglected, but that it should be presented in its more significant aspect as a major intellectual accomplishment of mankind. It is common to find the history of technology taught, but rarely in the perspective of scientific investigation. One of the reasons students have little appreciation of the work of scientists is that they have never really heard much about it. The growth of scientific ideas and theories and their contribution to the intellectual climate of man are the history of science, and as such have an important place in the modern curriculum.

Understanding science means knowing something about the procedures of theoretical inquiry and recognizing these procedures as the means by which the imagination of man and the laws of nature are focused upon unsolved problems. Research is not simply a rigid procedure of collecting and organizing data in terms of a problem followed by logical deductions. When taught in this manner, it is little wonder that many of the better students fail to find satisfaction in science courses. Ways of teaching are needed that give students a chance to feel some of the joys and sorrows of a research effort, to experience the excitement of discovery, and to appreciate the beauty of a well executed "play" in a scientific endeavor. A laboratory experience should leave the student with the feeling that he has in some small way been a scientist for a day.

Today most aspects of human welfare and social progress are in some manner influenced by scientific and technological innovations. In turn scientific knowledge establishes new perspectives for reflection upon social problems. The ramifications of science are such that they can no longer be considered apart from the humanities and the social studies. Modern education has the task of developing an approach to the problems of mankind that considers science, the humanities, and the social studies in a manner so that each discipline will complement the other. Scientists are as much concerned as the humanists with what man ought to do and why. Modern science teaching must at many points consider questions related to the processes of social change. This is not a responsibility most scientists would seek but one which must be assumed as science continues to influence more and more directly the life of every person

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ROBERT E. BILLS[1]

Our Best Defense . . .

Our need is for people who are open to experience. Such persons are able to relax their defenses, to symbolize their experiences more accurately and more readily, and to make responsible decisions regarding the direction for their growth.

A BABY is born and his four-year-old brother, Jimmie, is no longer able to care for himself. Maybe he starts anew to suck his thumb. Or he may be unable to feed himself. He begins to talk and to act like a two-year-old.

Janie is six and it is time to enter school. She becomes fearful, cries easily, hangs onto her mother and talks "baby-talk."

Dr. Sams received his doctorate in sociology and was full of ambition to change social conditions. But he moved too rapidly and found that he was no longer welcome in his first position. In his next position he was more careful. He made elaborate assignments from the textbook, stayed carefully "on the subject," and gave detailed examinations. As a teacher he was a bore and his students suffered. But he felt that he was safe from criticism and that he could justify his teaching methods.

Jimmie, Janie, and Dr. Sams are alike in at least one important respect; they are defending themselves in what they believe is a hostile world. And their recipes for defense are similar—"Go back to a time when you were safe and when your behavior gained you the rewards you desired."

Our World and Our Solutions

We Americans today believe that we live in a hostile world. So we feel defensive and all too willing to retreat to a time when we were in a less vulnerable position. We reason that, "Education is supposed to prepare us to meet our problems, and this we cannot now do. Let us turn back the clock to the educational system we had when we did not feel so vulnerable. Let's get back to the fundamentals"—the fundamentals being in this case the things we learned at the time we felt safe and secure. In effect we are saying, "Let's look backward for our solution."

But even a casual review of history shows us that our best methods of defense are to be found by looking forward. The crossbow overcame bows and arrows. Gunpowder made both obsolete. Nuclear fusion replaced atomic fission. The jet succeeded the propeller craft and the guided missile may replace both. Surely our best defense is to be found by looking forward and exercising initiative, imagination, curiosity and intelligence.

"Getting back to the fundamentals"

[1] The author is indebted to many people for much of the theoretical discussion in this paper but especially to Carl R. Rogers of the University of Wisconsin.

represents the opposite approach. It says in effect, "The way to survive is to give all people the same education, which should consist of telling them what the important facts are and how things are being done now and have been done in the past." In this sense, intelligence is measured by the ability to give the "right" or expected response. But is this really intelligence? When measured in this way original and creative responses, instead of adding to our intelligence, subtract from it. So a person is intelligent in this sense when he gives the same response as many other people or the response agreed upon by a group of experts as the correct response. And this sort of preparation leads people to rely on the expert, to search for the correct answer, and to suppress original and creative responses. Carried to its ultimate, it suggests that our continuing development should cease. Is it little wonder that when intelligence is looked at in this way, high IQ is not necessarily an indicator of genius or of potential creativity? We know that the innovator is not necessarily the high IQ person.

Creativity, imagination and uniqueness of behavior do not stem from an education that insists on people's seeing things in one or a few ways. These characteristics come from the capacity to see things in many different ways. The person who is in a position to make unique and creative responses is the one who is open to experience—his own present, past, and anticipated future experience as well as the experience of other people—and open also in his ability to interpret these experiences.

Our Changing World

But "looking backward" for our solutions to problems is inadequate for another reason. We live in a changed country with a changed "way of life." Not many years ago most of our daily efforts were bent toward subsistence and physical survival. The average man spent most of his week in working to feed, clothe, and house his family. Today, the average man spends less than half of each week in achieving his subsistence and he now looks for ways of living the rest of his time with a minimum of boredom. Any excess purchasing power which he has is spent for a higher material standard of living. But he is not really satisfied with this way of life because he suspects that he is not using his potential to the utmost.

His education, though, was and is directed primarily at subsistence. We have said to him, in effect, "If you will know these things and do these things in these ways, you will be better able to afford to buy what you need for subsistence. You will have an easier life than your father had." But today we live at a subsistence-plus level.

Another factor complicates the picture. As little as 15 years ago we thought we could reasonably predict the future. It was not entirely unrealistic when we said, "Learn these facts and how to do these things and you will be successful." And things changed slowly enough that once we had completed a formal education we were able to learn how to change in a slowly changing world. Today, change is greatly accelerated. In almost any area it is difficult for us to predict what will be important or how we will perform 10 years from now. Furthermore, it has become increasingly apparent that we should not prepare people either for an unchanging world or to

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change with a changing world, but that *we must prepare people to change our world* in directions agreed on by many people.

So we really can't look backward for our solution as some people have suggested. Our world is changing as well as our ability to satisfy our needs. We need people who can exercise intelligent, imaginative, and creative behavior.

The Open Person

As was suggested earlier, our need is for people who are open to experience; their own experience as well as that of other people. Why? Because these people seem to have characteristics which enable them to work successfully with other people in promoting solutions to the increasingly complex problems which face us. Open people are able to use their potentials in intelligent, imaginative and creative behavior. What are these people like?

If one word would suffice to describe open people it is "congruence." The open person is congruent in at least two important ways. First, his present view (perception) of his past experience bears a high relationship to the experience he had in the past and to his organic sensation of the experience at that time. He is able to recall his experience in awareness and his recall is as accurate as the experiential data will permit. He has no defensive need to deny or to distort his experience. Second, he is congruent in that there is a high relationship between his present perceptions and his behavior. He does not think, feel or believe in one way while behaving in another.

Because he trusts his recall of his experience, his locus of evaluation is within himself. He does not rely on other people to decide or to judge for him. Since he is closer to the data, he is best equipped to judge for himself. He meets each situation with the unique and creative behavior required of the newness of that moment.

We might ask, "Why is the open person that way?" The answer seems to lie at least partly in other characteristics he possesses. Of primary importance is the way in which he views himself—his unconditional positive regard. He places no conditions on his worth as a person. His feeling is that, "I am a worthwhile person with dignity and integrity." Because of this he does not need to distort his recall of his past experience or his perception of his present experience. For this reason, too, he values his own decisions and judgments.

Of equal importance is his unconditional, positive regard for other people. Because he places no conditions on the worth of other people he is able to share their experience with them. The experience of other people becomes a part of his experiential data. Because he does not place conditions on the worth of other people he is able to exhibit congruence between his present perceptions and his behavior. He says both by his words and by his behavior, "I will value you regardless of what you are like or even if you are uninterested in the things which stimulate me most."

Here is the person we need. He has broad experience available to him without distortion. He is able to behave without fear of criticism or of what his actions will imply about the worth of other people. His experience is continually expanding and he bases his decisions on the meaning of that experience for him. He works successfully with other people and communicates deeply with them. He is able to make the unique responses required by the newness of the moment.

He is concerned with central rather than peripheral issues, with internal (involving himself, his own thoughts, values, wishes, etc.) rather than purely external issues, and with core problems rather than symptoms. His approach is positive and forward looking rather than negative, defensive, situational, or backward looking. His curiosity and imagination are those of a happy child. How did he get to be this way? Part of the answer lies in how we teach.

The Teacher's Responsibility

If we teach for subsistence and adjustment, the teacher probably should be concerned primarily with assigning, drilling, hearing and testing to see that youngsters have learned the correct things and learned them in large enough quantity. Naturally, there is a danger of producing closed people by these techniques since we learn what are supposedly the "right" answers and the "right" ways of doing things. Since these are "right," other ways must be "wrong." When the teacher permits less academic behavior to occur he does it for motivational purposes or to reduce boredom. When he permits children to follow their own interests, it is usually as a reward for academic work well done.

In this sort of teaching a child is rewarded for giving the response and doing the things judged as best by a significant other person (in this case the teacher). The teacher places conditions of worth on the student and makes the important decisions for him. The child begins to distrust his own desires and worthwhileness. He distorts his own experience to make it more consistent with what he is told by the significant other. Since he is not usually allowed to follow his own interests, he begins to see himself as unimportant and perhaps as worthless. He begins to defend himself and thus becomes closed to further experience.

If we teach for openness the teacher's responsibilities are different. He seeks to establish a climate of concern for differences and acceptance of the these differences. He assumes that children want to learn, to grow, to develop and to make the most of their abilities. He sets no conditions on the worth of children. His primary concerns are represented by two questions: "What is really of concern to you?" and "What do you intend to do about it?" Evaluation of pupils is not directed at, "How much of the 'right' things did you learn?" but at, "How responsible a job did you do on the things that we agreed were important?" In this teacher's classroom the child is eager to express his interests and his different ways of perceiving. He recognizes that other people do not always agree with him but he does not think less of them or of himself for it. He is free to explore, to learn, and to exercise imagination and creativity. He is open to new experience.

The Conditions for Openness

We should probably take our thinking one step further. In general, what are the conditions which seem to pervade teaching for openness? Let us first look at an example of good teaching.

A high school science teacher, after spending some time with his class talking about the field of biology and the things which are of interest to biologists, asks his class, "How would you like to spend your time in this class? We can do many different things such as studying the text, developing class and individual projects, making field trips in relation to our class studies, and other things which

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ARTHUR W. COMBS

Seeing Is Behaving

The social sciences have been discovering some new ways of looking at human behavior, and these discoveries seem to have vast implications for the whole field of education. Two of these principles are discussed here.

HOW effective we are in dealing with the great human problems of any generation will depend in large measure upon the accuracy and scope of the ideas we hold about what people are like and why they behave as they do. This is particularly true for what we do as educators. People can only behave in terms of what seems to them to be so. Hence, the methods we use to solve our problems of curriculum will depend upon what we believe about the nature of the people we seek to teach. Whenever, therefore, science changes our ideas of what people are like, it must have far-reaching implications for our profession.

In recent years, the social sciences have been discovering some fascinating and exciting new ways of looking at human behavior, and these discoveries seem to me to have vast implications for the whole field of education. In this article I would like to state just two of these principles and point out some of the things it seems to me they mean for education.

Behavior Is a Personal Matter

The first principle is this: *People do not behave according to the facts as others see them; they behave in terms of what seems to them to be so.* The psychologist expresses this technically as: Behavior is a function of perception. What affects human behavior, we are beginning to understand, is not so much the forces exerted on people from without as the meanings existing for the individual within. It is feelings, beliefs, convictions, attitudes and understandings of the person who is behaving that constitutes the directing forces of behavior. In an election, for example, people who vote for the Democrats believe that the Democrats will save the nation while the Republicans will certainly ruin it. The reverse is true of the people who vote the other way. Each side behaves in terms of what seems to it to be so. But what is *really* the fact of the matter we shall never know, for only one party gets elected! In order to understand the behavior of people we must understand how things seem to them.

Our failure to understand this simple and "obvious" fact about behavior is one of the most potent causes of misunderstanding and failure in dealing with human problems. A good example may be seen in the case of the child who feels that people do not like him. Feeling that he is unliked and unwanted, the child is likely to make himself obnoxious in his attempts to get the attention of adults who surround him. When company

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comes, for example, he is likely to make a nuisance of himself in his attempts to attract attention. Parents seeking to put a stop to this kind of annoying behavior may say, "For goodness sake, Jimmy, stop annoying Mr. Jones and go to your room!" Such behavior on the part of adults simply serves to prove what the child already believes—"People don't like me very well!"

When we fail to understand how things seem to people with whom we are working, we may make serious errors in our efforts to deal with them. The moment, however, we understand an individual's behavior as it seems to him, our own behavior can be much more accurate, realistic, precise and effective. If a child *thinks* his teacher is unfair, it doesn't make much difference whether the teacher is *really* unfair or not. If a child thinks his teacher is unfair, he behaves as though she were. Whether she is *really* unfair or not is, as the lawyers say, "irrelevant and immaterial information" as far as the child is concerned. In this sense, seeing is not only believing; seeing is behaving! To understand behavior we need to understand the personal meanings existing for the people who are behaving.

The Effect of the Concept of Self

The second important point we are currently discovering is this: *The most important ideas which affect people's behavior are those ideas they have about themselves.* This, the psychologist refers to as the *self concept.* The beliefs we hold about ourselves, we are learning, are among the most important determinants of behavior. People who see themselves as men behave like men; people who see themselves as women, behave like women. Our self concepts even affect the things we see and hear. If you don't think so, try going window shopping with a member of the opposite sex.

The self concept, we are finding, is so tremendously important that it affects practically everything we do. We are even discovering that a child's success in school depends in very large measure upon the kind of self concepts he has about himself. Some years ago, Prescott Lecky observed that children often made about the same number of errors in spelling per page when they were writing free material, despite the difficulty of the material. One would normally expect more errors on harder material, but these children spelled as though they were responding to a built-in quota. It occurred to Lecky that they were behaving more in terms of their beliefs about spelling than in terms of their actual skills. Accordingly, he arranged to have a group of these children spend some time with a counselor who helped them to explore themselves and their feelings about their abilities to spell. As a consequence of these discussions an amazing thing happened. Despite the fact that these children had no additional work in spelling whatever, their spelling improved tremendously, and several of the children took up spelling as a hobby!

We are finding a similar phenomenon in the field of reading. Nowadays we catch children's visual difficulties fairly early so that it is rare these days to find a child coming to the reading clinic with anything very wrong with his eyes. More often than not, when a child is un-

able to read, the difficulty seems to lie in the fact that he has developed *an idea about himself* as a person who cannot read. Having developed such an idea, he gets caught in a vicious circle that goes something like this: Believing he cannot read, the child avoids reading and thus avoids the very practice which might make it possible for him to learn. Furthermore, believing that he does not read very well, he reads poorly when asked to do so. His teacher, in turn, observing this weakness, says, "My goodness, Johnny, you don't read very well!" which proves what he already thinks! Once having developed the idea that he cannot read, a child's experience confirms his belief and his teacher's, who should know, corroborates it. Just to make sure that the lesson is well learned, moreover, we may also send home a failing grade on his report card so that his parents can tell him too!

We are beginning to discover that the self concept acts very much like a quota for an individual. What a person believes about himself establishes what he can and will do. Once a self concept is established, furthermore, it is a very difficult thing to change, even if we would like to change it in a positive direction. The young man coming to the university believing that he is not very bright, for example, who is told by the test administrator that he has done very well, responds: "Are you sure? There must be some mistake!"

We are even discovering that the question of adjustment or maladjustment is very largely a question of the self concepts people have about themselves. Well adjusted people, we now observe, are those who see themselves as liked, wanted, acceptable, able—as people of dignity and integrity. People who see themselves so are no trouble to anybody. They get along fine in our society. They are essentially happy people who work efficiently and effectively, and rarely cause difficulty in school or out. The people who cause us difficulty in our society are, almost without exception, those who see themselves as unliked, unwanted, unacceptable, unable, undignified, unworthy, and the like. These are the frustrated people of our generation who frustrate us. They are the maladjusted, unhappy ones who fill our jails, our mental hospitals and institutions.

Some Implications for Education

We have now stated two modern principles of behavior:

1. That people behave according to how things seem to them.
2. That the most important ideas any of us ever have are those ideas we hold about ourselves.

These two very simple ideas have vast implications for education. In some ways they corroborate things we educators have been feeling all along. They also raise questions about some of the things we have been doing. And, finally, they seem to point to some new ways of solving old problems. In the remainder of this article I would like to point out two or three of the important implications these ideas seem to have for me.

Education Must Deal with Meanings

If it is true that behavior is a function of how things seem to people, then education to be effective must deal with people's *meanings*—not just facts. As educators, we have done pretty well in gathering information and in making information available to people. Where we get into difficulty, however, is in helping people to discover the meaning of information in such a way that they will

behave differently as a result of the process. When people misbehave it is rarely because they do not know what they should do. Most of us already know a great deal better than we behave. We are like the old farmer who said when they asked him why he wasn't using modern methods, "Heck, I ain't farming now half as well as I know how!"

It is over a failure to understand this problem that we sometimes get into communication difficulties with the public. The public wants the same thing we do. They want kids who *know* something, who *understand* something, but most of all, who *behave* as though they know something. So do we. When the public, however, sees children behaving inadequately, they are likely to assume that the reason they behave so is because they don't *know* any better. But you and I as teachers are aware that this is not the problem. We know that it is very rare that teachers fail because of their lack of knowledge of subject matter. When teachers fail it is almost always because they are unable to bring about the third step we have been talking about—namely, how you get information translated into behavior.

Modern psychology tells us that it is only when knowledge becomes meaning that behavior is affected. If it is meanings that affect human behavior, then it is meanings with which we educators must deal. We will need to concern ourselves with a different kind of facts. We will have to deal with convictions, beliefs, attitudes, feelings, ideas, concepts and understandings. I suspect that we have not always done this in our zeal to "get the facts" from books. Sometimes we have failed to understand that people's behavior is not the result of objective facts, but of *personal* facts, the meaning things have for the behaver himself. I am afraid we have too often said to the child, "George, I am not interested in what you think; what are the facts?" Small wonder that some children conclude that what goes on in school has nothing to do with life in a meaningful way at all!

Since personal meanings lie inside people, they are not open to direct manipulation. To change meanings we must find effective ways of helping students explore and discover for themselves. We have to let personal meanings become an integral part of the curriculum. Many schools and many teachers have already learned to do this with great skill. We need now to push the movement forward.

Teachers Do Not Have To Be Psychiatrists

One of the most exciting implications of these new principles is this: if it is true that behavior is a function of perception, then the causes of behavior lie fundamentally in the present and not in the past. Psychologists for several generations have told us that in order to understand an individual we need to know all that has happened to him in the past. As a result many teachers have often felt helpless to deal with a child because for one reason or other they were unable to acquire knowledge of all his past experiences. Many educators have never been entirely happy with this point of view. We have often felt, as Gordon Allport once expressed it, that "people are busy living their lives forward while psychologists busily trace them backwards!" We are now finding that many modern psychologists are providing support for our suspicion that this preoccupation with the past may not always be essential.

If it is true that behavior is a function of perception, then behavior is a result

of how people are perceiving right now, *today, as of this moment!* This understanding opens a whole new world for education. This is not to say that behavior is not *also* the result of what has happened in the past. We can look at the causes of behavior in two ways. A person's behavior is *historically* the result of all the things that have happened to him in the past. It is *immediately* the result of how things seem to him at this moment. For example, a child who has been badly rejected in his youth may come to feel about himself that he is unliked, unwanted, unacceptable, that the world is a pretty tough place, almost too much for what he has to offer. These feelings he has acquired, of course, because of the things that have happened to him. But his behavior today, now, as of this moment, is the result of how he is *feeling* today. This way of looking at behavior opens a whole new frontier for educational practice.

When we believed that behavior was entirely a function of the past, there was, of course, very little we could do. It had all been done. Such a belief leads to preoccupation with the child's history instead of what is going on at the moment. The historical view of causation also encourages the old army game of passing the buck. The college says, "What can you do with youngsters who come so badly prepared from high school?" The high school says, "What can you do for the child who comes to you like this from elementary school?" and the elementary school teachers say, "What can you do with a child from a home like that?" The poor parent in our society is low man on the totem pole. He's stuck with it; he doesn't have anybody he can pass the blame to, except maybe to say, "Well, he gets it from the father's side of the family!"

If we believe that a child's behavior is solely the result of the forces working upon him, there is very little we can do to help, and we are always able to charge off our failures to other people. If, however, behavior is a function of perception, then there are tremendous things we can do in the present. We can help a person to see differently now, even if we cannot change his past. It means that you and I can help children in school without the necessity of having to change their environments. It means that there is something we can do for *every* child no matter what kind of background he comes from. Although we can rarely do much about the past, there are important things we can do about the present.

This new understanding also lifts a great weight from the teachers' shoulders. It means that we do not have to be social workers or psychiatrists, we can just be teachers! It means we do not have to pry, we do not have to know all about a child's background in order to be able to deal with him effectively. This is not to say that knowledge of his past and of his home situation might not be helpful. It does mean that we *do not have to have it* as an absolute essential. I don't know how you feel about this, but this sets me free to do a lot of things I was never able to do before. This simple idea has already caused revolutions in the field of social work, in psychotherapy and in the field of human relations. It seems equally promising in what it may offer to education.

For one thing, teachers do not have to feel defeated. If behavior is a function of perception, then no matter what goes on elsewhere in the child's life, it is still important what you and I do as teachers. People get their perceptions from those who surround them, and that means us. It may be that there are some children with whom we have to deal who are so

sick that we cannot make *all* the difference. We may not be able to change a child completely, but neither are we helpless. Fritz Redl once said in a speech, "You know, the difference between a good child and a naughty child is not very great. The difference, however, between a naughty child and a real tough delinquent is a very great distance. Wouldn't it be wonderful if we could just keep them naughty?" I find this sentiment very reassuring. I think that what Redl is trying to tell us is that none of us need feel defeated. That whatever we do is *always* important even though for a particular child it may not be enough to produce immediate results.

Finally, if the self concept is as important as modern psychology tells us, this fact has vast importance for curriculum construction and design. One of the great tragedies of our time is that we have literally hundreds of thousands of people in our society who are the prisoners of their own perceptions. Believing they can only do x well, they only do x much. The rest of us, seeing them do only x much, say, "Well, that's an x much person," and this just proves what these people have thought in the first place! Such people are the victims of their own self concepts. Everyone loses as a result of this great waste of human potential.

But people get their self concepts from the ways they have been treated by the persons who surround them during their growing up. From the minute the child is born we begin to teach him who he is and what he is. Whether we are helpful, or hindering, or of no account at all in the development of children's self concepts will depend upon ourselves. We *can* behave in ways that don't count, ways that have nothing to do with meanings, and they will quickly disregard us. Or, we *can* behave in ways that are important in helping them discover who they are and what they are—in positive fashion. We are, in a sense, the architects of children's self concepts.

Society needs adequate, well adjusted, informed people as never before in history. What then shall we do to develop these kinds of people? I think the answer lies in the above definitions of the kinds of people we want. Earlier in this article we stated that whether or not an individual was likely to be well adjusted, was largely a matter of his self concept. We observed that people who see themselves as liked, wanted, acceptable, able, dignified, worthy, etc., are the kinds who make effective, efficient citizens. People, on the other hand, who see themselves as unliked, unwanted, unacceptable, unable—these kinds of people are the ones who cause us trouble. If this is true, we do not have to be psychiatrists to help children grow.

To be effective in these terms, we need teachers who can understand and perceive how a child is thinking and feeling. We need teachers who can understand the impact of the ways they are behaving and the things they are doing on the perceptions of children. We need teachers skilled in helping children explore and discover themselves and their relationship to the world in which they live. In the final analysis, the question of curriculum construction boils down to this: How can a child feel liked, unless somebody likes him? How can a child feel wanted, unless somebody wants him? How can a child feel acceptable, unless somebody accepts him? And how can a child feel able, unless somewhere he has some success? In our answers to these questions related to the kinds of self concepts we seek lie the basic criteria for curriculum change and improvement.

H. HARRY GILES

Social Learning in a Free Society

Increasingly we are recognizing the necessity to identify resources and to analyze needs in areas of social learnings.

IN PERIODS of rapid change and threats to accustomed ways of life, human beings are likely to seek ready-made scapegoats, and short-cuts to salvation. The times have underlined this point, both with regard to Russia and to the public schools. An astounding reversal in American thought in recent or post-Sputnik days has brought us from wholesale condemnation of Russia to an almost frantic clamor to turn out scientists and engineers in the Russian way. A tide of concern and criticism of American education, unprecedented in recent generations, has lately been channeled into calls for greater rigor, more selectivity, more science and mathematics, mass-production methods.

The truth is that the relationships of men and nations, the perceptions we have, the goals we seek, and our ability to understand ourselves and others—these are the social learnings which will determine our survival and development. How we think and feel provides motive power far greater and more decisive than how we split atoms.

What is good enough for Khrushchev is not good enough for America. We have a great technology, great scientists, and effective training for them. Yet we have something far beyond this, in the American ideal of equality of opportunity and the notion that the state exists for man, not vice versa; that the full development of the human individual is the highest value of our social organization.

We try for the education of all our people. The state does not select 1 of 10 for advanced education as do the Russians—and as much of the Western world has done. Much is to be improved, continuously we may hope, but we can have confidence in the democratic way to be flexible and productive in science as in other fields. Our main problem is not how to educate for mass destruction or for developing nuclear power. It is how to educate in the social relationships which will enable us to reach the goals of a free society.

Needs of Our Time

Men are primitive still, and their social systems are groping. Governments are often too busy to think. Yet the course of social evolution is steadily toward more recognition of individual personality as our highest value; more freedom and equal justice for more people; more achievement through the use of many kinds of talent rather than through reliance on the single or authoritarian leader; more encouragement of searching curiosity, creativeness, the humane quality in living.

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We witness facts which indicate need for these directions of effort:

—the fact that the relatively new concept of education for all, which America was the first to institute, is sought throughout the world, and particularly among disadvantaged peoples;

—the fact of the momentary, though conceivably fatal, lack of symmetry in the development of physical science and technology over that of social relations practices;

—the spread of collectivism and the lessening of individual independence

—revolutions against old political and economic empires; and

—the survival of preatomic power politics in an age which calls for full use of new methods in the communications of peoples and the employment of space, time and resources.

We witness the power of ideas to move millions of colonial peoples. We see that creativeness is the essence of great engineering and research triumphs. We see war, which General MacArthur long since pointed out is outmoded, is "no longer a feasible instrument of national policy," absorbing many times the billions that peace and education cost.

We see teachers and administrators struggling to make education more truly professional while they are hampered by a current popular use of the schools as a scapegoat for national anxieties. We see Negroes in the U. S. A., 16 million of them, determined to live by the U. S. Constitution and supported in that determination by the U. S. Supreme Court, yet thwarted by some political leaders and lacking the help of others.

We witness the beginning of a new awareness of an interrelated world by service personnel who may have been the first in their families to go more than 50 miles from home, but at the same time, we see a tightening of restrictions on free exchange of persons. We have heard a long succession of cries for aid and understanding from oppressed people, beginning with the Russians themselves and not too long since in Hungary. Great moral issues have been raised for us by those who have appealed to this country as one which itself came into being by throwing off the yoke of a distant and autocratic government. We see in our own homes and communities that there is great need for, and that there is available for use, a great new store of research knowledge which can enable us to enhance the inherent drives for belonging and growth. Yet we persist in a thousand other uses which block such development.

In short, we glimpse a great horizon, lit with human promise, as we live in anxiety, and cling to fetishes.

Needed Emphases

The school, in such an era of anxiety and of genii-like power, can be an instrument of retreat, of flight into the past. The school can easily become involved in petty quarrels and attempts at self-justification. The school can muddle along.

But if the school is to contribute to a free society, to the best that is known about human development, it will be through the doing of a daily job that is informed and permeated with the best of modern knowledge on human development and social relationships. In such a school, there will be recognition of the points of focus, the needed emphases which the conflicts of our time have pointed out. Some of these points of

focus in social relations education are the following:

Subject Emphases

Race likeness and difference
Religious likeness and difference
National culture likeness and difference
Economic class problems and values
Sex differences
Age differences
The Oldtimer and the Newcomer
Family relationships

Process Emphases

Choice-making and participation
Experimental methods in problem-solving
Analytic processes
Creative processes
Social control—discipline, government, facilitation
Interpretation and expression
Increasing contact with the widest possible range of people, ideas, materials and methods.

It can be seen that these points of focus are widely applicable in planning the whole curriculum. There is no subject field which cannot make use of the processes.

Goals

Education that focuses on these matters, whether it be conducted in the social sciences, home economics, physical education, biology, mathematics or other classrooms will seek the following goals —goals which have been shown to be obtainable in extensive classroom tests:

Recognition and acceptance of difference and the contributions as well as the disadvantages of difference

Integration of differences within working groups in the classroom—of ethnic, temperament, intelligence, skill and leadership difference, for example—to the end of more productive association

Drawing stimulus and knowledge from a wide range of contact with people and materials, and learning to distinguish the special case from the representative case

Adventure and exploration in a variety of forms of group organization and the encouragement of individual progress. A conception of every class and every interest group within a class as an opportunity for the study of social relationships and development

Better relationships between classes, grade levels, schools and the school and community

Learning and contributions to community, national and international living through free expression and discussion of contemporary questions, and through special projects

Faith in human intelligence to solve human problems

Understanding of the dynamics of behavior

Understanding the difference between authority and authoritarianism

Clarification of social purpose.

The Administrator and the Teacher

If it be truly attempted, a program of social learning of this kind requires administrators of perception and courage. Of its teachers it requires faith and understanding of the goals of a free society, and awareness and feeling for the issues which confront attempts to achieve that society. The teacher who is himself a practicing citizen, taking responsible part in political struggles and efforts for the social welfare, will obviously be far more highly aware of his own and others' prejudices, of the precise meanings of social issues, and of the time and skills required to improve the human lot. Thorough mastery of the content of his special field, and a knowledge of historical perspective go hand in hand with effective citizenship and professional contributions. Honesty and a desire for rigorous evaluation are requisites, and, with all the rest, these may be achieved best in a school where there is a sense of common cause and mutual

support between teachers, teachers and administrators, and school and community.

Sources of Help

Though they have not received the dramatic treatment that has been given to the physical sciences, the findings of social science research in the past 15 or 20 years have profound meaning for human relations and social development. Examples of such findings will be given briefly, and some suggested readings.

First, however, it is wise to recognize that while research can yield reliable and valid answers to many of our questions, research cannot and does not try to usurp the function of the philosopher and the artist. The synthesis of evidence and thinking necessary to establish the aims or directions in which we wish to go, and for which we wish to employ the best resources is left to us to borrow or develop. Each individual and each group, then, that undertakes work in the social relations field must necessarily begin with its own formulation of broad purposes and specific objectives.

In the democratic society, there are many sources from which we may derive aid in making these formulations. Among the founding fathers of our nation, Jefferson stands out as one who expressed most clearly the fundamental trust in humanity, and in the intelligence of the electorate to reach wise decisions. John Dewey's whole life as philosopher and educationist was devoted to elaborating a democratic faith and its rationale. W. H. Kilpatrick followed with clear indication of the implications of the democratic creed for school practices. There is likewise wide literature available on this subject, including yearbooks and articles published by professional organizations such as ASCD, the AASA, the ACEI, the ACE, the secondary and elementary principals associations and the social studies division of the NEA.

In short space it is not possible to illustrate in anything like adequate measure, the extent and quality of the research now available to aid the social relations educator. Some of the following, however, are concepts and researchers of immediate value to education for the goals given earlier.

First of all, field theory, as taken from physical science and translated into principles of human development by such psychologists as Wheeler and Perkins in America, and by Kurt Lewin—first in Germany and later in this country. The great contribution of field theory to our subject is in its establishment of the relatedness of all phenomena, physical or psychological, with such implications as the need to look for many forces or "causes" for behavior. Wolfgang Köhler and the whole school of Gestalt showed us, also, that what we perceive in learning and acting, is due to interplay between the environment and the individual or group, and receives always its special organization in each individual nervous system. Field theory also has given strength to the idea that development, the release of dynamic potential in human beings, depends on situations which allow and trigger such release. All good teachers know how true this is, and how important it is in facilitating all learning—that is, all self-teaching.

Sigmund Freud and other psychoanalysts have revealed the existence and the tremendous power of the submerged or unconscious feelings and motivations in each of us. Carl Rogers and the nondirective or client-centered school of psychotherapy have demonstrated the value of catharsis, and the power of the individual to grow in his emotional acceptance of reality and self. Gordon Allport

has made an exhaustive study and summary of personality: drives, styles of behavior, and many other aspects of being. Along with other psychologists, and with biologists and anthropologists, Allport has also investigated bigotry and prejudice—how these develop and how they damage both the individual and the social group.

Adorno and others, in their monumental study of the "authoritarian personality" have established the existence of rigid, fearful and aggressive types, who derive comfort from conformity and rejection of difference to what may become a pathological degree. Ruth Benedict, Margaret Mead and other anthropologists have shown the vital, often dominant part that the culture plays in shaping our reactions and lines of development, even our ability to love and hate certain objects and persons. Dollard, Warner, Havighurst and Davis have made us realize the existence of caste and class lines throughout our culture, and the obstacles to free movement of mind and ability which these can place before us.

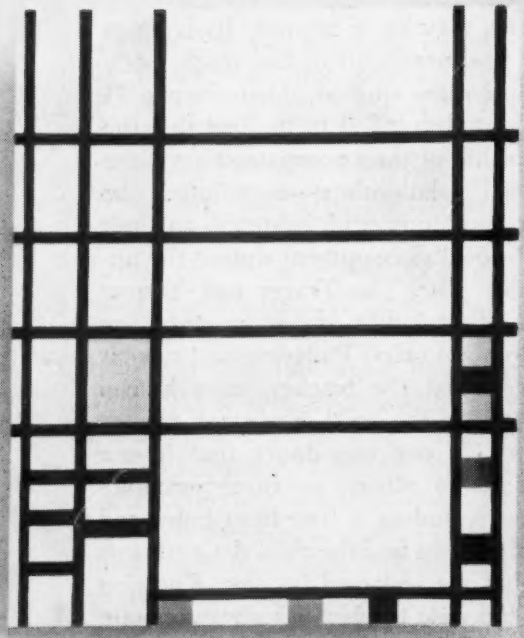
In the whole field of groups, group productiveness and group structure, the work of Helen Hall Jennings, Moreno, Lippitt, Lewin, Bradford and many others has led us to recognize that acceptance or rejection by the group plays a central part in development; that democratic group structure aids the growth of initiative and learning in ways that authoritarian or laissez faire leadership cannot; and that it is possible for any teacher to identify, by relatively simple means, the true leaders and the basic reactions (in feeling as well as intellect) of group members to the content and method of conducting classes.

A recently completed study by the present author, of apprentice teaching at Shady Hill School in Cambridge, Massachusetts, may be of interest. Its findings show that nearly all of the whole body of apprentices studied, taken from a 21 year period, testified to the fact that the way of life of their associates there—the personal relationships—constituted the single most powerful influence on their professional development during the apprentice year. The Trager and Yarrow study of prejudice among primary age children in the Philadelphia schools showed that the teacher, as a human being, was the most important change factor. No one can doubt that in our relations to others, as these examples illustrate, and as is true from babyhood to old age, we find the chief determinants of what we seek and become. Knowing this, the wise teacher has always sought to establish such rapport, and such methods of group administration as will put fewest obstacles in the way of the seeking mind, and give maximum encouragement to all forms of learning.

The wise teacher uses constantly principles, now amply supported by research evidence, such as these: acceptance and belonging as necessary to growth; the recognition and understanding of difference; the primary need for self-respect if there is to be full progress; the natural eagerness to succeed, to do well; the facilitation of true learning by joint planning, joint evaluation and by inclusion of both group and individual studies; the giving of clear-cut function, status and recognition.

In every home, school and community, the vast number of problems which challenge the attention of the alert teacher in the realm of self-understanding and the understanding of others, forms an equally vast source of teaching desiderata in every subject and educational experience. Here we speak of the relationships between the deep demands of the human

(Continued on page 63)



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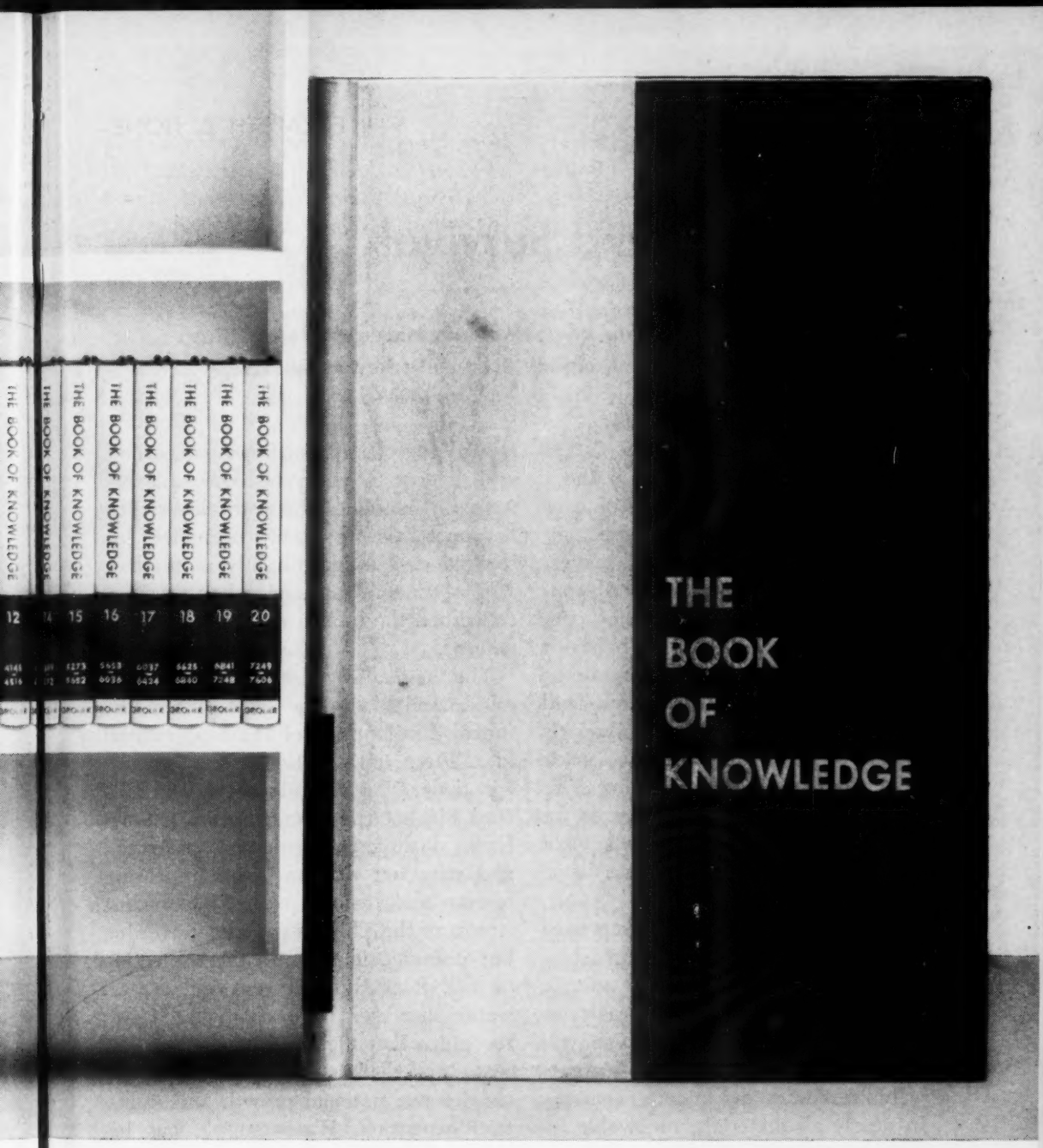

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ELIZABETH B. HONE

Conservation and Survival

A study of conservation education materials reveals startling inadequacies in an area closely related to human survival.

MOST OF US think conservation is a good idea but what do we do about it? How much and what kind of conservation is being taught our younger citizens? What do curriculum makers think of when they use the word conservation? How effective is existing conservation education in changing behavior of young people toward their resources? As a basis for further research and curriculum improvement a nation-wide study of curriculum materials was made by the Conservation Foundation. This study brought together and analyzed for the first time in tabular form what schools plan to teach about conservation in grades K-XII.

We found that curriculum makers used three terms practically synonymously—*conservation, wise use, resource use.* In practically all curriculum materials examined, *conservation* and its synonyms included renewable resources, nonrenewable resources and human resources.

In nearly all materials, renewable resources meant soil, water, plant and animal life. In a majority, nonrenewable resources meant metals, minerals and fossil fuels. The term human resources evoked a variety of ideas such as health, safety, recreation, vocational guidance, community resources, area planning and planning for gifted children and others.

A detailed tabulation showed that about 80% of the curriculum materials related to conservation were concerned with one or more of the renewable resources. Less than 10% were devoted to nonrenewables, the sinews of modern industrial civilization. Slightly more than 10% of the total material on conservation concerned the human resource, however defined.

The inequality of emphasis may be understandable in the light of the historical development of the conservation idea. From its inception a half century ago under Theodore Roosevelt and Gifford Pinchot the term *conservation* became synonymous with the protection and wise use of our fast-disappearing forests and wildlife. The black dust storms of the Thirties gave long overdue but dramatic impetus to the protection of soil. Recently, recurrent and critical water shortages have compelled us to recognize that there is no substitute for water and that its conservation is essential for our national growth and industrial expansion. Water supply has become a critical resource. Because we can see the disappearance of these renewable resources, we are conscious of the problems. We are less conscious of the diminution of our underground water supplies, our nonrenewable metals, minerals and fossil fuels. "Out of sight, out of mind."

Wise use of the human resource is an involved problem and one which, in the

past, has been regarded as a problem for the sociologist rather than the conservationist. However a natural resource does not truly become a resource until it has been converted by human management and creativity to human use and consumption. For example, taconite lay discarded on the Mesabi Range until new and better processing made it a useful resource material. The plastic goods which fill our stores today we owe to the genius of our chemists and engineers. These are illustrations of what we at the Conservation Foundation call our "new and to-be-discovered resources; those depending on the brains and skills of specially trained people for discovery and development."

The interlocking nature of human and natural resources is exemplified in the evolution of the skills needed to practise conservation as a profession. For example, soil conservation districts require the skills of those who know people as well as soils. Watershed management requires a galaxy of talents and training. The concept of land as space has created the need for area development specialists, those trained in sociology, law, economics as well as biology.

The growing practice of Chambers of Commerce and of many industries in establishing area development departments or divisions, whose job it is to stimulate and assist local planning groups in the formation and implementation of their plans, is a relatively new activity which will result in accumulating social values as well as in wiser land use.

These new conceptual approaches are cited only as examples of a changing climate of thought with respect to the solutions both of new and of chronic problems in resource use.[1]

Limiting our study only to what the curriculum materials labeled as conservation, we find the term included in a high percent of both general and special (secondary science and/or social studies) curriculum materials. Sometimes conservation is included only in the front or introductory material and list of objectives. Sometimes specific principles and illustrative activities are spelled out in the body of the curriculum.

Conservation seldom occurs as a separate or special subject. Most frequently it is planned to be integrated throughout the curriculum. But may a subject not be completely lost through such dissemination? Do we not tend to get what we teach for? If conservation is not a clear idea and definite objective in the teacher's mind, how can it come through to the children? Considering the present muddled state of our notions about conservation, it is no wonder that little learning and therefore little change in behavior toward our natural resources are evident with the general public.

Those few curriculums which teach conservation as a separate subject, we believe to be no more effective than those in which conservation is integrated throughout with other subjects. The notions of conservation are in general equally restricted to renewable resources. The suggested activities and experiences in learning about conservation are in general in these materials equally unrelated to the urban environment of the majority of our school children.

Relation to Other Areas

Our study reveals that conservation is taught throughout all grades—most often throughout grades V-IX and especially

[1] Conservation Foundation. *Annual Report.* New York: The Foundation. 1957. p. 8.

***ELIZABETH B. HONE** is research assistant for The Conservation Foundation, New York, N. Y.*

in grade VIII. We should remind ourselves that these grade levels are not necessarily best adapted for conservation education. They perhaps seem the best adapted because of the *kind of conservation commonly taught.* We refer to typical concepts and activities in these materials pertaining to conservation of soil, forests and wildlife. Such concepts are especially appropriate for rural children. However, they often remain vague abstractions for average urban and suburban children.

Some schools regard conservation education as a form of citizenship education. Such training begins in the first grade where the care and wise use of personal and school property and materials are stressed. Judged from this point of view, most primary teachers, without realizing it, are already doing an excellent job of conservation education. As the children go on to higher grades, society expects the schools to emphasize training in skills looking toward adult competence for earning a living. Is it not likewise important to help children see the relationship between our stewardship of raw and processed materials and the cost of living?

Our study reveals that conservation is not necessarily the property of any one major curriculum area. It is not necessarily the property of science, though the masses of technical reports from state conservation departments and organizations might lead us to assume this to be true. However, our curriculum analysis shows that conservation is chiefly associated with science in the elementary grades and with social studies in the high school grades.

In addition to the analysis of curriculum materials, we analyzed elementary and high school *science* texts. A tabulation of conservation in the nine *published* elementary text series gives three times more space to renewable resources than to human resources, four times more space to renewable resources than to nonrenewables. In other words, both science texts and curriculum materials interpret conservation as being concerned mainly with renewable resources. The texts accord slightly more importance to human resources and to nonrenewables than do the curriculum materials.

In general, the science texts appear to interpret human resources more broadly than do the curriculum materials. Recreational aspects of conservation are cited, but some science text writers also call attention to human resource conservation under such headings as: People as Planners, Conservation Goes Further, Conservation of Wastes, Conservation at Home, and Wise Use of Materials.

The three leading texts for high school courses in general science, biology, chemistry and physics were also scrutinized for conservation content. The tabulation reveals several facts. Their authors view the scope of conservation to be the renewables, soil, water, plant and animal life, and to a lesser extent the nonrenewables—minerals, energy sources, etc. Though the textbooks include the inexhaustibles—sun, ocean, air, in varying degrees—these are not so definitely linked to the conservation picture. When it comes to the new and to-be-discovered resources, the textbooks are full of them. Yet here again, the connections to the resource-use outlook are not made clear. These new and future resources are not labeled conservation, though without them our conservation situation is completely lopsided.

Is some of the difficulty and confusion, perhaps in our antiquated and outdated concept of conservation? Ought not a modern concept to encompass more fully all of our resources, whether renewable,

nonrenewable, inexhaustible (at least temporarily so) new and to-be-discovered resources?

If there were such agreement on the scope of conservation, then authors of science texts (particularly in the "hard" or physical sciences) might come to the conclusion that conservation is very much their territory. What is already in the texts by implication might then be spelled out more clearly and set in the framework of our total resource picture.[2]

Our study of curriculum materials reveals to us a kind of conservation education geared more to the past than to the future. Heavy accent on renewable resources and the accompanying illustrations and activities are indeed appropriate to rural schools in an agricultural age. But we live in an industrial age with a majority of our children in urban and suburban schools.

Our study also reveals another need and a second challenge to conservation education—a need for inclusion of some form of long-range area planning, of community planning in a conservation education program. Granted, such planning must be adapted to the capabilities of the children for whom it is designed. For example, third graders sometimes make a map of the streets leading from their homes to school. Why not make a map of their school ground, analyzing use of the different sections? A scout troop might map a small city park and study its use. A recent study of school camping [3] shows that most camps have some form of conservation program in their regular schedule. Very few have any long-range conservation program for studying the camp site. Can conservation become part of a child's thinking and behavior unless this area gets out of the category of a "reading about" and "looking at pictures" kind of approach? Is it not possible, if we regard conservation as an aspect of citizenship, to translate it into a "doing" area of experience for children?

A recent study of urban children's attitudes and ideas about conservation [4] points up a real challenge for conservation education. There is apparently a great dearth of conservation material meaningful to urban children—a kind of conservation which they can experience and share—for example, wise use of water and space.

The conservation movement began half a century ago. As presently interpreted in general use, conservation education appears to have little braking effect upon our American tradition of prodigal use. The statistics show we are using present resources at an accelerating pace. Our expanding population will expect even faster use. Particularly will our people make demands upon "land as space."

> Once acres have been sealed over by steel, concrete, brick and wood, the soil that once clothed them must be stricken from the register of the world's renewable resources.[5]

Is there not an immediate need to inventory, to make tentative long-range plans for all unoccupied land? Does not real conservation imply seeing all the alternatives, "seeing life steadily and seeing it whole"? Does not conservation mean a matter of choices, and of education for *wise* choices?

[2] From a statement by Martha Munzer, research assistant, The Conservation Foundation.

[3] L. J. Ericksen. *A Study of Conservation Activities in Outdoor Education Programs in California.* Sacramento: California State Department of Natural Resources. June 1956.

[4] R. A. Donnelly. *A Study of the Conservation Ideas of 282 Urban Children.* New York: Teachers College, Columbia University. 1957.

[5] Conservation Foundation, *op. cit.*

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Column Editor: Fred T. Wilhelms

The Long Hot Summer

(The teacher writes the theme.)

When I was a youngster, my teachers used to show such a deep, personal interest in me that almost every one of them let me write her a theme on "How I Spent My Summer." In those days I didn't really have a felt need to do it. Now I have.

• • •

ONCE AGAIN, this summer, after years of sitting in a college administrator's chair and seeing only my scholarly colleagues, I was a classroom teacher. Full time! Handling two graduate courses for experienced high school teachers.

It was a purely delightful experience! Any educator worth his salt would warm up quickly to these earnest, idealistic public servants. Every evening I bragged about them to my wife, gaily taking full credit for their high quality.

And yet, before long something began bothering me. It was hard to identify, but—after my years of little contact with public school teachers, perhaps idealizing them, perhaps building my image upon my collegiate colleagues—there was something that made it hard for me to get into the rhythm of their thought and feeling.

Eventually two factors began to stand out:

1. Quite a few of these teachers were not the easy masters of their subject fields that I had assumed they would be

2. There was in some of them a dark underlay of pessimism—almost defeatism.

Then I began analyzing my perceptions, checking on myself, hunting for possible causes. And now I'd like to take each factor separately, spin it out a little, and submit my reasoning about it.

Subject Matter Mastery

Let me make it clear at the outset that there were no incompetents in either class. Many were obviously the cream of their faculties; taken together, they would have made an outstanding faculty; and, in a way, they all "knew their stuff." But a good many of them seemed to know it in only one order, one pattern—roughly the order and pattern in which it had been taught to them, the order and pattern (and scope) of the traditional high school presentation. They couldn't play around with their stuff in the deft, nonchalant manner of the real master. They couldn't shuffle the deck, cut it any old way, and be comfortable playing the cards as they came up. They couldn't reach across big spaces and weave relationships, and they weren't relaxed when perfectly familiar material showed up in new syntheses.

There was another subject matter angle that kept bothering me: Very few of these teachers were venturing out to the frontiers of their fields. (Maybe you ought to check my observa-

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tion to see if it is valid: What proportion of the English teachers you know are looking into semantics or having fun with communications theory? How many social studies teachers are moving out into cultural anthropology and bringing back something of value to their classes? How many math teachers are on friendly terms with binary systems or the theory of games?) I don't think I ever expected to see them becoming highly expert in the new areas, but I had assumed an intelligent—even eager—general awareness.

Now, as you'll see in a minute, I am not about to write a diatribe against high school teachers. I like and admire them far too much for that. But the plain fact is that really good teaching demands a broader and deeper and handier knowledge of what they are teaching than many of our teachers have. And a high school teacher who isn't so vividly interested in his field that he takes joy in reading and getting around and reaching out to the edges just simply cannot be as good as our dreams.

There must be a reason, for these are wonderful people. There is: "When I get through with five classes in a row—175 kids—I'm pooped! I'm not just tired; I'm dragged out. I don't even *want* to read anything—let alone the fact that I've got a stack of papers to do anyway."

There it is: a *real* reason, no factitious excuse. I said to myself: *This is the way it's going to be until we get these hard workers some tranquility in their lives, time for something of the reflective life.* The high school teacher is driven and driven and driven through his day; teaching too much, doing too many chores. If the American people want teaching that is released to be truly creative, they have some buying to do.

And yet—there are the vacations.

Maybe the one reason isn't wholly adequate. Are we professors of education adding to the problem? Are we, for example, making subject matter mastery seem less admirable than it is? (I caught considerable hint of this in my classes. Students seemed reluctant to mention "straight" subject matter. Time after time it was I who had to mention and defend the values of organized knowledge. I'm sure we don't *mean* to deprecate knowledge, but I sensed that many graduate students felt respectable only when they were talking about personal development—and didn't seem to see disciplined study of systematic information as truly a part of that development.) Maybe we need deliberately to play up the ideal of the teacher who knows his stuff so thoroughly that he can move about in it delightedly and delightfully.

Are our liberal arts brethren, who so greatly love the ideal of knowledge, producing a program with closed ends, instead of an open-ended challenge to a lifetime of study? Are they failing to build in a love of adventure in new learning or to equip their graduates to do independent work? It almost seems so, for the mention of new possibilities all too often encounters not only indifference but also *fear*. Why in the world should a college graduate be scared to tackle something related to his greatest competency?

To look at one more possibility—are administrators and supervisors making teachers fuss so constantly with the minutiae of the day that they never get their heads up to look out to the horizon? Is the whole environment of a high school teacher as stimulating, intellectually, as we could make it if we tried? Somehow, I can't shake off the feeling that a great many teachers see them-

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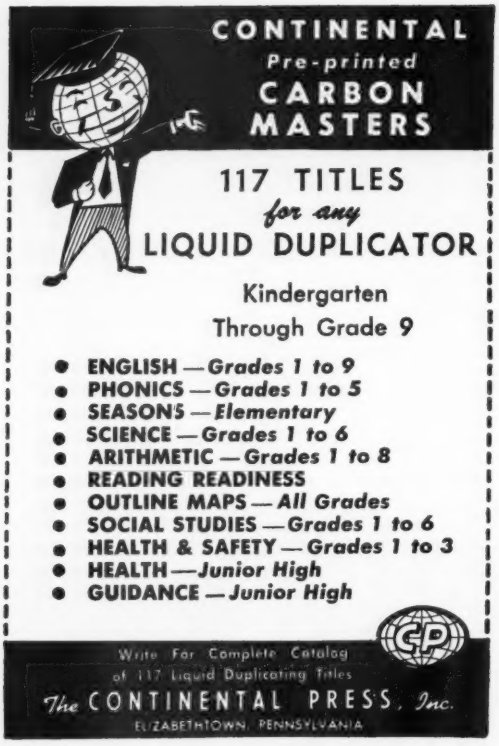
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selves as "little" people. If they do, who is teaching them to view themselves that way?

Far be it from me to see subject matter mastery as all a teacher needs! But I strongly suspect that many of the other developments we so greatly need—toward greater flexibility, for example—are inhibited by lack of sure-footedness whenever the old monolithic subject matter begins to shake and weave a little. I, for one, want social science teachers who can chat at ease with social scientists, and science teachers who can rub shoulders comfortably with professional chemists and physicists. I don't see that we in professional education have been stressing that sort of goal enough.

Pessimism

Whenever I deal with public school teachers, I am amazed again at the number who seem to see the world going to the dogs. They take for granted a "breakdown of the American home." They visualize a decline in morals. They see the school as newly imprisoned, frozen in a pattern of "conformity," no longer free as it once was to teach honestly and hard-hittingly. Above all, they view a large portion of the latest generation as unprecedentedly frivolous, resistant to study—or much, much worse.

No experienced practitioner can fail to sympathize with their complaints. We've all had to struggle with youngsters who lacked the brains to do traditional school work, who did not know how to read, or far worse, resisted our every effort to teach them. We have all been angry about homes that wrecked good children's chances. And, in the larger sense, we have all had our frustrations because the larger society negated so much of the school's influence.

But all this is no new thing. In fact, there is considerable reason to think today's homes healthier than ever, to see much in today's society that is newly praiseworthy. My sympathetic point is that many of today's high school teachers feel their problems largely *are* a new thing. At times they reveal a dark hopelessness. They seem to feel overwhelmed by a situation that is just too much for them. Sometimes they come close to losing their faith in the generation they are teaching.

I believe I am beginning to see what's eating on them. For what it may be worth here is my hypothesis:

Assume for the moment that the general public, now that it sends nearly all its children to high school, expects the school to do for all about the same thing it used to do for an elite. Then assume that the teachers have accepted that picture-in-the-head of what their target is. Let's say that hitting that target

represents their only *real* definition of success.

Well, *that is an impossible, overwhelming situation,* isn't it? Any conscientious teacher with only that definition of success would have to see himself as failing, in relation to many of his students—would have to see his school as a mess.

Oversimplified, of course, but I believe we have here a fairly good snapshot of the going state of mind. You won't see it at the casual level, for teachers, like all of us, cover up their fears most of the time. But I believe the hopelessness is there, a dark underlay that explains many surface phenomena. Our teachers have one basic definition of success: getting across the same kind of subject matter they have come to value. And—for a large part of their student body—that can't be done.

The road to neurosis!

And what have we to offer them? We've scolded them a-plenty, in our books and articles and conferences. We've produced a fine sense of guilt. Sheer mental hygiene demands that we come up with something more positive. The teachers won't settle for just relaxing and letting down the standards on the same old content—they're too good for that, thank goodness! We at the engineering level have got to build with them a school model that can provide authentic, recognizably genuine, success for all kinds of youngsters, and thus success for their teachers.

A large order! You will note that I shall grow vague at this point, where the solution ought to come. I cannot provide it. Frankly, I don't believe there are any leaders in American secondary education (specifically excluding elementary education) who *can* provide it. We get pretty smug at times, because our vision is somewhat ahead of current practice; but we don't really have the answers either. If we did have them and could put them in clear, cogent form, they would be seized upon.

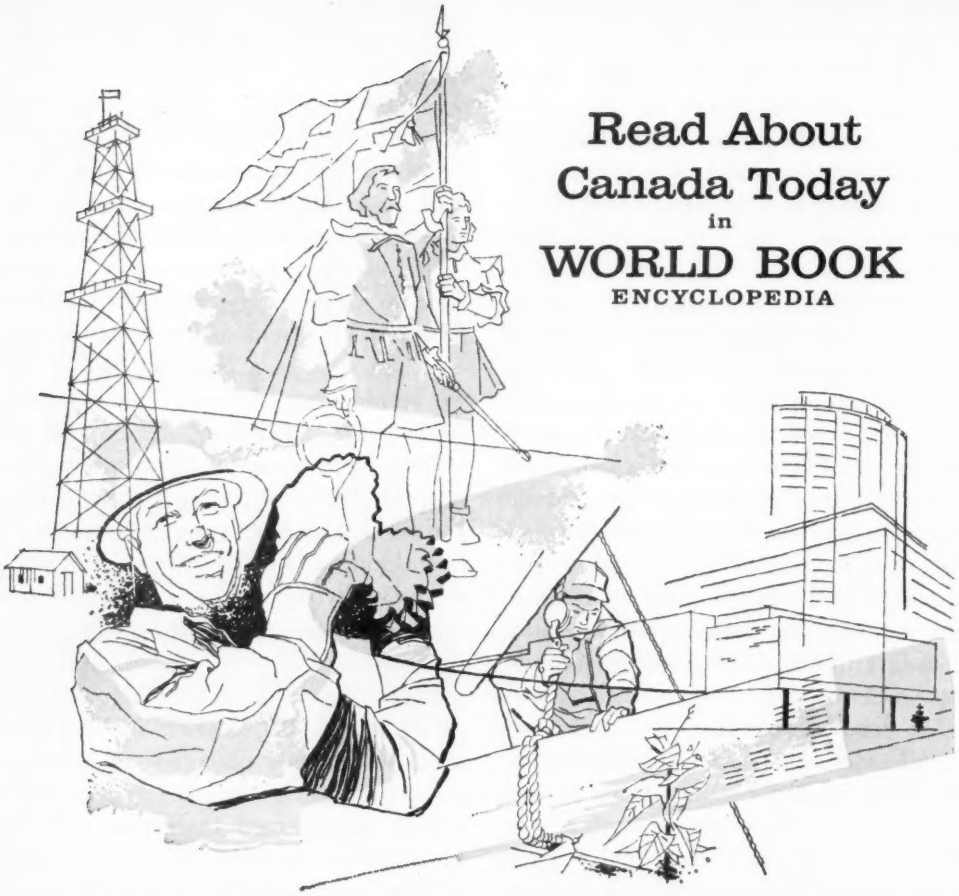
Let me put that more concretely: If some community were to come to the leaders in secondary education and say, "We'll give you the money and the freedom to develop the right high school program," is there any one of us who could give them a clear image of what we would aim at? Could we genuinely resolve the conflicting needs and demands upon secondary education, and properly serve all the amazingly diverse youth? I'm not so sure. I think we've been kidding ourselves a good bit, while we mentally derogate the principals and teachers because they haven't found the solutions.

But, at least, let's review the problem: Many of our best teachers feel hopeless, because the only objectives they accept as representing genuine success are clearly predestined to failure with the bulk of their students. They need to learn a truly and justly satisfying set of objectives which can be achieved. Then they need to work in an institution which values those objectives and makes their accomplishment possible. When they do, they will be happy, they will relax; and then, by one of those anomalies so common in human affairs, they will succeed in doing much that they now so heartbreakingly strive for.

• • •

And so, you see, I, who began the summer mildly scapegoating teachers, ended it blaming myself—and others like me. I got pretty worked up about it!

—FRED T. WILHELMS, *professor of education, San Francisco State College, California.*



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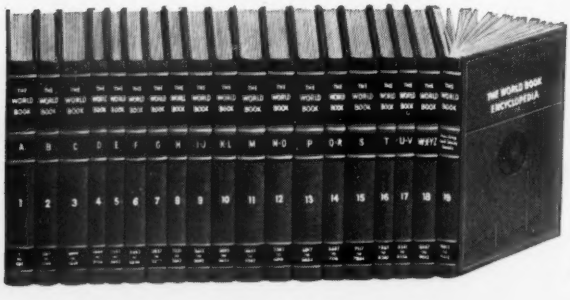

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Curriculum News

Column Editor: Paul R. Klohr
College of Education
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Columbus, Ohio

A New National Program

FOR SEVERAL years this column has served as a main channel for reporting curriculum news to its readers. As in other years, this column will continue to do this but will also report new developments in the Cooperative Action Program for Curriculum Improvement, "CAPCI." To provide a background for understanding news about CAPCI, this first issue reviews briefly what this new national ASCD program is and how it began.

Although officially the program came into being by action of the ASCD Board of Directors at the Seattle conference last March, extensive planning and work preceded that action. For example, the chairmen of the ASCD committees and commissions, meeting in Washington, D. C., in the autumn of 1956, contributed significantly with their recommendation that state and regional units assume increasingly heavy responsibilities in the total program of the national organization.

Again, deliberations of the St. Louis conference in 1957 demonstrated the urgency for more concerted effort in the support of field developments in curriculum. Throughout that year many individuals and groups, meeting in several sections of the country, undertook the task of shaping up the document adopted in Seattle as the broad outline of a program for action.

Program Content

What did that document propose? The heart of the proposal lies in a section titled "Content of the Program" which reads:

> Although there are many significant curriculum problems confronting the schools of America, and others may develop within the foreseeable future, certain ones seem most pressing. It is expected that responsible groups within ASCD will make a final selection of problem areas to constitute the content of the program for the next few years. This final selection might be the three outlined below, or one or two of these, or of some different one or more problems, or of some combination of those below and different ones. The three problem areas suggested herein for consideration in determining the content of the program are:
>
> 1. Reaching toward a balanced curriculum
> 2. Providing for individual differences
> 3. Evaluation of learning.
>
> The cooperative action program would be directed toward finding and implementing more generally satisfactory plans for dealing with the selected problem areas than those which have heretofore been utilized.
>
> The contributions which ASCD is uniquely qualified to make in regard to such problem areas, and which should be focused and unified in this program, are as follows:
>
> First, the organization has many on-

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going activities—publications, conferences, and committee projects—which could be more closely tied to these problem areas, and used more systematically to define problems, present possible solutions, and focus the attention of its membership on these areas.

Second, the organization has long been interested in the encouragement of research and in the dissemination of research findings, and could take more decisive steps to uncover and publish such research data as are available and/or might become available.

Third, the organization is in strategic position to organize pilot studies and other field research. With an adequate staff for this purpose, the organization could sponsor a number of well-designed research studies to explore new solutions to educational problems.

The proposal then outlined, in a general way, the scope of each problem area and identified some of the major issues needing study in each.

To carry out this program three levels of operation were projected: (a) modification of existing activities without additional costs, (b) modification of existing activities with additional costs (to be met by the operating budget), (c) sponsorship of field research studies involving substantial costs. The Board of Directors and the Executive Committee, supported wholeheartedly by the membership at large, resolved to undertake the program at all three levels.

First Steps

Much has happened since Seattle! One of the first steps in moving ahead on Level 2, for example, was the meeting of ASCD state and regional presidents held in Washington, June 7-10. This meeting resulted in plans for bringing the activities of many state units into sharper focus with respect to the three problem

areas. Appointed also was a CAPCI Committee to advise the Executive Committee and the Washington staff on possible next steps to be taken at both levels 2 and 3. Members of this CAPCI committee are: William Alexander, Susan Crutchfield, Clarence Fielstra, Jane Franseth, Robert S. Gilchrist, Arthur J. Lewis, and this column editor.

From an initial meeting of this committee held in Cleveland July 5-7 came plans for (a) a national survey of curriculum practices schools are using to provide for individual differences, and (b) an investigation of resources available for the sponsorship of field research studies involving substantial costs.

With this as a background, future columns will report on further developments in CAPCI. Since the major efforts of this action program are centered in the work of individuals and groups at the state and regional levels, we need your help in keeping in direct touch with what is happening in your own school situation. And so, please let us hear from you—a note, a card, a clipping, a copy of a bulletin, a phone call. As these come in, we shall relate them to one another when such a relationship seems valid. We shall draw also on reports from the Washington staff as its members confer with state units and as they continue to be directly involved in the coordination of this new venture.

Available, too, are the more general news releases and reports on matters of interest in the field of curriculum. We shall select from among these and, within the limits of a column, shall try to relate their content to your interests.

—Paul R. Klohr, *assistant dean and coordinator of instructional program, College of Education, The Ohio State University, Columbus; and chairman of the CAPCI Committee of ASCD.*

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Curriculum Research

Column Editor: Alexander Frazier

A Study of Research in Progress

THIS IS both a postscript and a preface. In beginning this year's column, perhaps we should provide a follow-up of the final column for last spring. That contained an account of what the ASCD Research Commission hoped to accomplish if it succeeded in holding the Third ASCD Research Institute.

You will be pleased to know that we held the institute and that we think it accomplished at least a part of what we hoped it would. The June "News Exchange" included a brief report on the institute. A fuller report, including the scholarly addresses presented there, will be published later this year as a pamphlet under the title, "Learning: An Area in Need of Study and Research." We hope you will be looking forward to seeing it.

But of more immediate importance is the announcement of the Fourth ASCD Research Institute. We expect by this time you will already have received some information about it.

The institute, which we hope will contribute to the development of the Association's new Cooperative Action Program for Curriculum Improvement, is scheduled for December 6-10, 1958, and will be held in Washington, D. C., at the Burlington Hotel.

The theme of this institute will be "Underdeveloped Capacity to Learn: An Area in Need of Study and Research." As we are all aware, increasing attention is being given today to the possibility that what we measure as "intelligence" is better thought of as *developed* capacity. The key question then becomes: What stands in the way of and what supports the development of capacity to learn? Many recent investigations in the behavioral sciences bear on this question and promise to provide leads to educators in planning for more effective teaching.

For the Fourth Institute, scholars and investigators in the behavioral sciences will be invited to report their findings on the development of capacity to learn. The fields covered will include underachievement in school, mental retardation, personality theory, and cultural anthropology. From these reports, institute participants will pull out the ideas that seem to promise most for field study and research on the conditions that would make the most difference in producing developed capacity.

We know you will consider seriously the value such an experience as this might have for you in your work.

Learning as We Go

How does curriculum research get started? What is involved in developing design? How do instruments for data collecting evolve? Who handles data? What happens to false starts? Side issues? New problems?

These are the kinds of questions, Research Commission members believe, which are likely to press in upon ASCD'ers engaged in field studies. These, too, were some of the leads that occurred to us as we were trying, last February in

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Seattle, to define a theme for this year's column. We were agreed, however, that it would not be enough simply to talk generally about these questions. Perhaps we have done too much of this already. Then someone proposed that reports of curriculum research in progress might provide a little more body for such discussion. Could we persuade persons already in the midst of a study or near the end of it to pause long enough to look around or to think back so that they might tell what it was like on the way? Would that be more helpful than general advice?

We tested out the idea on the Commission members themselves. Various ones who are in the midst of study or experimentation told something of their experiences.

We heard briefly of studies that had begun with teacher concerns, others that started with the interests of institutional research teams. We heard about the anguish of conceptualization, the frustrations of blind alleys, the paralysis in action caused by changing personnel. We heard of the exhilaration and release brought about by new insights and unexpected successes. We got an inkling of the need to be thoughtful all the way, the need for continuous vigilance to the demands of ways and means, the need to take plenty of time.

More than anything else we were impressed with the variety in these reports. There were different levels of concern, differing degrees of formality, widely differing combinations of persons-at-work —principals, college personnel, teachers in the classroom, consultants from state departments, experts from research institutes.

As a result, we decided that a thoughtful self-analysis of some of the research in progress we had heard about could be of value in helping others know what to

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Ruby Warner examines current practices in all the major curriculum areas (language arts, social studies, science, arithmetic, health and fine arts) with the purpose of satisfactorily meeting the needs of both the self and the group. In each area she gives concrete illustrations of the practices that have succeeded in helping the child progress toward self-realization and useful citizenship.

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look for, perhaps what to watch out for. Such reports would certainly have more body than would generalized "answers" to research problems. And the series, with its emphasis on real situations, should be an interesting contrast to the kind of column we conducted last year on what most needs to be studied.

Thus, the succeeding columns will report what on-going research looks like from the inside to those who are doing it.

Miriam Goldberg and Harry Passow of New York will analyze their procedures in studying the underachieving gifted. From Kansas, Robert Ridgway will tell what a group of teachers encountered as they developed a program for the mentally retarded.

Several Florida teachers will work with Glenn Thomas in reporting their experiences with individualized reading. Grady Parker and Elmer Ellis will analyze a Texas study on the achievement and personal adjustment of underage first-graders. A Wisconsin study in color perception of elementary school pupils will be reviewed by Arthur Adkins.

In these accounts, we hope to give others help in getting a better picture of what research looks like while it is being undertaken. We hope to offer something of practical value in helping you find better research answers to some of the questions you may have in mind.

We hope you will find what we do useful.

—ALEXANDER FRAZIER, *director, The University School, The Ohio State University, Columbus.*

(Continued from page 16)

on the earth. The development of atomic power and man-made satellites has served to intensify the necessity of examining their effect on the lives of men. Both science and social studies teachers must intensify their efforts to help young people to understand our culture as it is influenced by scientific discovery.

It took a ballistic missile to wake up the American people to a realization that the most underprivileged and undereducated group of students in America is the gifted and the talented. Educators are being asked to explain why the majority of students are put into the same courses, taught in about the same way, using the same textbooks, doing the same experiments, and spending the same number of hours per week and of months per year in a course. Parents want to know what is really being done for the "bright" youngster. They are not happy with the "special opportunities" provided for the rapid learner which frequently consist of simply doing more of the standard activities. Schools are now charged with the responsibility for devising new curricula and teaching methods that will give the academically gifted educational opportunities at least comparable with those of other students.

What have satellites, rockets and missiles contributed to American education? They have created an awareness of the importance of science and technology to social progress and economic security. The public realizes more clearly than heretofore that it is through the program of schools that science will be advanced and the ideals of a free world perpetuated.

Curriculum Bulletins

Column Editor: Marcella R. Lawler
Professor of Education
Teachers College, Columbia University
New York 27, New York

NOTE: The following faculty members of Teachers College, Columbia University, assisted A. Harry Passow, former editor of "Curriculum Bulletins," in the preparation of this column by evaluating the materials in their areas of specialization: Professors H. Phillip Bacon, Maurice Fouracre, Phil C. Lange, Matthew B. Miles, Robert L. Pace, John W. Polley, Kenneth D. Wann, and Paul W. F. Witt.

• Louisville Public Schools. *Junior High School Program of Studies.* 31 p. *Senior High School Program of Studies.* 96 p. Louisville, Kentucky: the Schools, 1957.

These bulletins contain concise, compact descriptions of course offerings in the city's junior and senior high schools. The booklets were prepared to update course descriptions thus providing the basis for re-evaluating the total program and to furnish useful information for pupils, parents, teachers, counselors, principals and others. The material is factual and presents at a glance a picture of what is offered in organized courses and activities.

• Nebraska State Department of Education. *A Program of Studies for Nebraska Schools.* 1957. 20 p. *The Junior High School in Nebraska.* 1956. 14 p.

The first of these publications is a brief bulletin which proposes a K-12 program of studies, emphasizing the continuity of instruction in the basic subject matter areas and suggesting offerings at various grade levels. A simple program chart presenting required and elective offerings, is followed by scope and sequence suggestions in content areas. Group guidance is stressed throughout. The second bulletin deals with important considerations for junior high school organization and curriculum. It was prepared as an interim publication prior to the completion of the *K-12 Program of Studies.* Half of its 14 pages cite the basic assumptions on which the junior high school program is based. Implementation of these assumptions then follows. Three charts deal with a suggested time allotment, a schedule for a six-year high school with 12 teachers, and a schedule for a separate junior high with 12 teachers.

• New Hampshire State Department of Education. *Minimum Standards and Recommended Practices for New Hampshire Secondary Schools Grades 9-12.* Concord: the Department, 1957. 19 p.

The mandatory minimum conditions of program, staff and administration necessary for state-approved high school programs are presented in this publication. Two levels are recognized: minimal conditions which must be met and recommended practices considered desirable. Each statement of a minimum standard is followed by another with recommendations for better practices. The size of typical schools in New Hampshire is taken into account. Recognition is given to the fact that standards and mandates by themselves do not assure a

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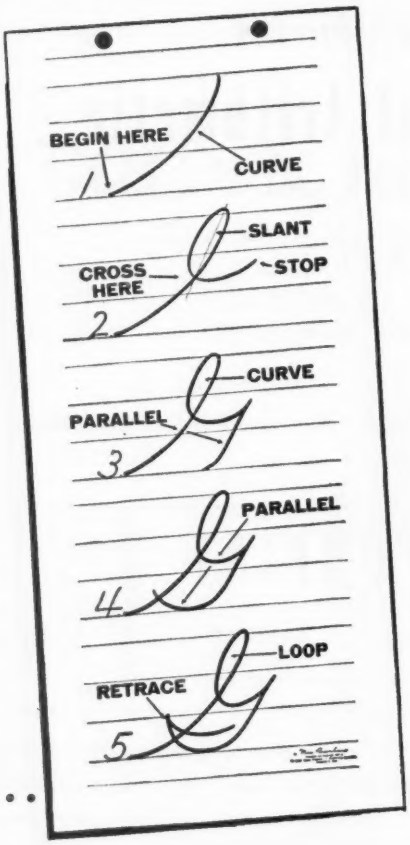
good instructional program but that effective teaching, supervision and administration are needed to achieve the instructional aims outlined.

• Bureau of School Service, University of Kentucky. *Person-Centered In-Service Education: Why Not?* Lexington, Ky.: the University of Kentucky, 1957. 41 p. $1.00.

James R. Ogletree prepared this quarterly *Bulletin* of the bureau. He suggests that in efforts to influence the quality of instructional programs, it would be meaningful to "shift our attention away from the teacher as a gadgeteer or method-user and concentrate it upon the teacher as a person." Centering its focus on the human being involved is one strength of this booklet. Another is its effort to unify discrete in-service programs. Instructional improvement, current techniques for improvement of instructional programs, and inadequacies of present programs are presented and critically examined. The final chapter—one which needs testing—proposes a program with four characteristics: person-centered, multi-techniqued, fluid organization, and leadership. The bulletin has three weaknesses: group influences on personal change are ignored, the program proposals are not sufficiently explicit, and all "leadership" and "structure" are stereotyped as opposed to personal growth and, therefore, bad. The bulletin may serve, however, as a good starter for program revision in a system.

• New York City. *Guide to Curriculum Improvement in Grades 7-8-9.* (Curriculum Bulletin 1955-56 Series, No. 10). New York: the Board of Education of the City of New York, 1957. 114 p. $.50.

This bulletin is a guide to teachers and supervisors in developing and improving the early secondary school program. The characteristics of early adolescence and



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the foundations for junior high education are presented as the basis for the instructional program. The underlying philosophy of the junior high school, and the day-by-day program in action, are detailed. The final section deals with the problems of early secondary education and suggests possibilities for continuous curriculum improvement. An annotated bibliography includes important bulletins and reference materials for the teacher and curriculum worker.

• Whittier Union High School District. *Your Neighbor Looks At Your High Schools*. Whittier, Calif.: the District, 1957. 152 p.

A lay committee prepared this report of a curriculum study, focusing on the program provided students in the district. The outline of the organization and operations of the citizen committee reflects soundness, although the conclusions and recommendations are sometimes vague and general. The bulk of the publication contains subcommittee reports dealing with various aspects of the program. The usefulness of a report of this kind is, of course, largely limited to its home community. It can serve, however, as an example of self-appraisal of a system in which lay persons are willing to invest more than a thousand man-hours in studying the program.

• School District of the City of Ferndale. *The Role of the Learning Materials Teacher*. Ferndale, Mich.: the District, 1956. 9 p.

This brief report describes the function of the Learning Materials Teacher in the Ferndale schools. Against a background statement of the nature and significance of instructional materials, the booklet "shows the varied activities performed by these teachers in a professional service to fellow teachers and their pupils, and the relationships of these activities and materials to the many ways

in which children learn." The list of functions of these specialists, together with the conclusions and recommendations of the report, should be useful to other schools in planning and organizing instructional materials programs.

• St. Paul Public Schools. *Maps and Globes, Elementary and Junior High.* Curriculum Bulletin No. 63. St. Paul, Minnesota: the Public Schools, 1957. 29 p.

A teacher committee surveyed the field of maps, charts, atlases, and globes and developed this report with recommendations and suggestions. The lists are organized by type and by grade level. All maps are identified with the catalogue numbers used by publishers, thus saving time for the teacher who is accustomed to searching map catalogues. The guide would have been even more useful had the committee surveyed such key study tools as climatic types, economic products, and vegetative type maps, all essential to good geography and social studies instruction.

• Philadelphia Public Schools. *Industry As An Economic Institution, Grade 8B (Tentative).* Philadelphia: the Public Schools, 1957. 113 p.

This is the fourth in a series of social studies resource bulletins for junior high school. Designed to guide a one-semester study of industry, the bulletin contains interesting and useful resource material for the teacher. Suggested activities are carefully planned and evaluation suggestions are made.

A somewhat expanded bibliography would have made this bulletin more readily usable.

• University of Oregon. *Analysis of Reading Readiness Tests.* Curriculum Bulletin No. 180. Eugene: University of Oregon, December 19, 1957. 10 p. $.50.

Reviews of 12 of the most widely used tests of reading readiness are summarized. Material from widely scattered sources is pulled together in an easy to use bulletin for persons concerned with the selection and utilization of this type of instrument.

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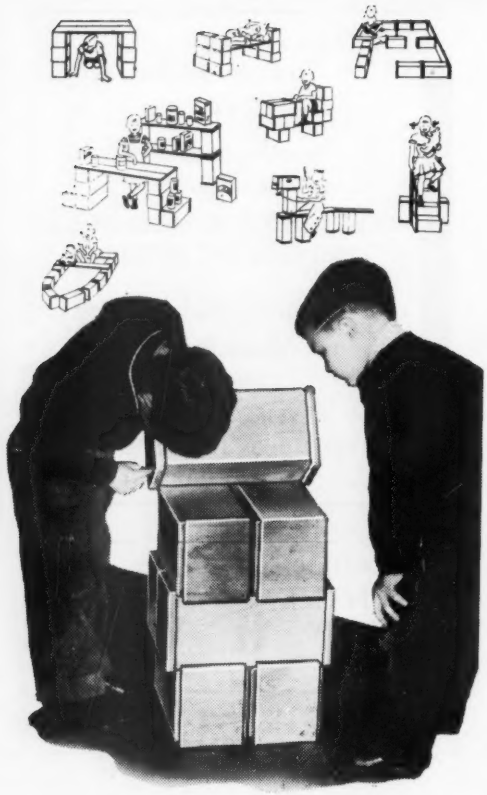
• Arlington Public Schools. *Suggestions for Working with the Slow Learner in the Regular Elementary Classroom, Grades 1-6.* 25 p. *Tentative Guide for the Instruction of the Mentally Retarded Classes, Grades 1-6.* 134 p. Arlington, Va.: the Public Schools, 1958.

In response to requests for specific help for the teacher of slow learners, a committee prepared a brief bulletin. The characteristics and needs of the slow learner are itemized, together with implications for curriculum adjustment. The bulk of the bulletin contains suggested activities in the language arts, arithmetic, science and social studies. The second



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bulletin is much more complete and inclusive. The total program for the mentally retarded child is discussed in detail under such chapter headings as physical and mental health, home and family living, school and community living, basic tool subjects, pre-occupational education and resource units and materials. References for teachers, plus recommended films, are included.

• San Diego County Public Schools. *Suggested Activities for Special Training Classes.* San Diego, Calif.: the Schools, 1958. 79 p.

The collection of activities and approaches contained in this bulletin is one result of a process in which the teachers of mentally retarded children met regularly to share experiences and practical ideas. Emphasis is on the learning of the manipulative skills which mentally retarded children can perform successfully. Suggestions for cooking, music, sewing, art, science, social studies, health, physical education and recreation activities are contained in this bulletin.

• Portland Public Schools. *Science Classes for Exceptionally Endowed Students in the High Schools.* Portland, Oregon: the Public Schools, 1957. 40 p. $1.50.

This is the sixth in a series of reports summarizing experiences gained through four years of experimentation. Basically a summary of practice and experience, it can also serve as a guide. The methods of identification and the science program are described, and the evaluation results reported.

Specific recommendations are made regarding administration, materials, instructional emphasis, selection and education of teachers. A lengthy appendix presents examples of several special classes and seminars for gifted in biology, chemistry and physics.

• Cincinnati Public Schools. *World Geography.* Cincinnati: the Schools, 1958. 260 p. $3.50.

The details of content and materials for a two semester elective course in world geography for grades nine and ten are presented in this bulletin. The topical and regional approaches to geography are combined. This makes the avoidance of repetition difficult and calls for special teaching skill. Much of the content is highly factual with little real development of critical man-land relationships. Annotated bibliographic and audio-visual lists are extensive. Format of the guide is attractive, and includes good photographs.

• Junior High School Association of Illinois. *Extra-Class Activities in the Junior High School Grades.* Urbana: the Association, 1957. 54 p. $1.00.

Extra-class activities are now justified by educators on the basis of their direct contribution to student growth. This publication presents first a description of related literature including opinions and practice. Data revealing the current status of extra-class activities in schools with grades 7-8-9 are presented. Schools with superior programs are described.

(Continued from page 20)

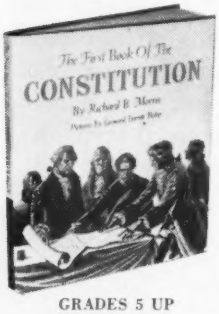
you might suggest. We don't all have to do the same things. Maybe some of us will want to work together while others work alone. What seems most important to you at this time? I will help you in any way I can and if I can't help we may be able to get some other people to help us."

Here we have all of the conditions which are necessary for producing open people. The teacher, a significant other person, believes that the students want to grow, to learn, and to develop. The teacher places no conditions on the worth of the students but says, "I am ready to go with you in directions which seem important to us both." He does not say, "Because Sarah has made good grades in the past or has a high IQ, I am willing to trust her and give her freedom." Nor does he say, "After you have learned what is important to me, I will let you do some of the things which are important to you."

He has now set the stage for the development of open people, but he must go further. As the children begin to think through the experience they desire, the teacher must be an effective and nonevaluative listener. He must see the child and his problems as the child does and he must attempt to communicate his understanding to the child. He must experience what the child experiences and perceive as he perceives as if these were his own experiences and perceptions but without ever losing sight of its "as if" nature.

If the child experiences this sort of empathic understanding given from a significant other who places no conditions on his worth, he is able to relax his defenses, to symbolize his experiences more accurately and more readily, and to make responsible decisions regarding the direction for his growth. He will grow toward being a more intelligent, a more imaginative, and a more creative person who has a forward looking desire to become a part of the solution to man's problems.

GRADES 3-6



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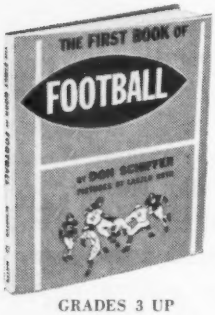

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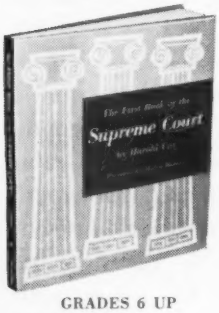

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Significant Books in Review

Column Editor: Howard B. Leavitt
Contributor: Charles D. Byrne

America's Children. ***By Eleanor H. Bernert.*** *New York: John Wiley and Sons, Inc., 1958. 185 p.*

Those who have had occasion to turn to the U.S. Census reports are well aware that they contain a staggering amount of material. *America's Children,* a volume in the census monograph series, is an attempt to isolate from the census reports important data relating to the status of children and education in America. By conducting various analyses of economic and social factors relating to these data the author makes it possible to obtain a clearer picture of American children. The book is replete with figures and graphs either borrowed from census reports and other sources or produced by the author to show relationships among census data. For example, on page 30 the author reports on correlations between certain social and economic statistics uncovered by the Census Bureau:

There appears to be a significant negative correlation (–.75) between current school expenditures per pupil and percent of selective service registrants who failed the Armed Forces Qualification Test, July 1950-June 1951.

There appears to be a significant negative correlation (–.84) between median family income and percent of enrolled males 14-17 years old retarded more than one grade.

There seems to be no significant relationship (–.28) between percent of dwelling units with television and percent of enrolled males 14-17 years old retarded more than one grade.

However the book contains more than figures and graphs. In nine chapters covering such topics as: living and family arrangements, school enrollment and educational attainment, variations in school progress, and youth in the labor force, the author analyzes the data and helps the reader find meaningful relationships. What the author stops short of doing, however, is suggesting implications for education, social service or welfare agencies in general. Having called the reader's attention to critical census data and having uncovered intriguing relationships among related factors, the rest is left up to him.

There seems to be a tendency among teachers to project onto other states or regions of the nation the characteristics of children and schools in their own locality. Although the U.S. and its schools appear to be surprisingly homogeneous, especially to visitors from other lands, there are of course striking dissimilarities. Through the use of statistics, these differences, sometimes overlooked or smoothed over, stand out clearly. The differences related to the states' ability to pay for education and the differences in retardation of students are among the most revealing. To this reviewer the most interesting chapter concerned this latter point—variations in the progress of students in school. From relating drop-out rates to such variables as sex, region, urban-rural residence, color, etc., new dimensions of the school's holding power could be seen.

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The data, presented so clearly by the author, invite interpretation. It would seem that too seldom do educators get the chance to mull over statistics or to draw implications from important facts. More likely, the generalizations are already drawn, in texts, speeches, or in conversation. Greater attention to basic data especially in schools of education, might result in a more acute perception of American education.

This book will provide important facts for educators, youth workers and sociologists in general. Two other purposes are suggested, both relating to college teaching. This book could be used as a reference in courses in American Public Education, in which, under the guidance of an instructor, students could be helped to analyze data and arrive at considered generalizations about U.S. education. This book might also be used as a reference in a statistics course. Because such courses are frequently taught without relation to live statistical data of importance, students could use the book to analyze the types of statistical treatment and then could be helped to make statistical inferences and valid interpretations of facts concerning American education.

—*Reviewed by* HOWARD B. LEAVITT, *associate professor, School of Education, Boston University, Massachusetts.*

Education in Nepal: A Report of the National Educational Planning Commission. *By Rudra Raj Pandey, Kaiser Bahadur, Hugh B. Wood.* *Eugene, Oregon: American Nepal Education Foundation, 1958. 352 p. ($6.00)*

This report is a landmark in educational history, especially for the little Himalayan country of Nepal, which lies as a 500-mile buffer state between India and Tibet. From 1846 until 1951 this country was ruled by the Rana family and was completely closed to the Western world. To maintain this tight control, the people were kept in ignorance, and as late as 1952, 98 percent of the people were still believed to be illiterate and there were only six high schools in the entire country of nine million people.

In 1951 the King led a revolution, overthrew the Ranacracy, and established a benevolent monarchy with the promise of democracy for the people as soon as they were ready. To achieve this democracy the King in 1952 solicited the aid of the United States Government in developing agriculture, health, village improvement, and education. In 1953, the King's Government appointed a 46-man planning commission which studied the educational needs of the country. *Education in Nepal* is a report of this committee's activities, but it is much more than a formal recitation of statistics.

The Report first of all provides a brief historical and cultural background for the reader. Next, there is a summary of

educational conditions in Nepal as they existed in 1954. The major part of the book, however, is devoted to a master plan for education in Nepal from the primary school level through the university level, including adult education. This section provides a thrilling example of educational planning on a large scale where there were few traditions and precedents to hamper the thinking of the group. The Commission set as its major goals: universal primary education in 25 years; adult education for all who desire it in 15 years; a national University in 10 years; improvement and expansion of secondary education; and teacher training programs necessary to attain these goals. The final chapter is a review of the activities of the University of Oregon Contract Team which, working under the United States Operations Mission in Nepal, has been responsible for the development of the educational program thus far.

This book will be of particular interest to those concerned with teacher education, or comparative education, or those who are interested in a challenging story of our foreign aid program at work.

—Reviewed by CHARLES D. BYRNE, *chancellor emeritus, Oregon State System of Higher Education, Eugene.*

(Continued from page 31)

organism, and the possibility that learning—both of subject and method—*can* occur at its best, as a means to continuing development.

The outcomes of social relations education will be infinitely varied, but the direction will be toward that freeing of the person from the narrow view and experience which may bring countless new ideas and techniques to the constructive resolution of the social conflicts of our time.

Suggested Readings

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From the Editor

Themes. Much of the 1958-1959 editorial content of EDUCATIONAL LEADERSHIP will be directed toward areas of education that in recent months have felt severe criticism. For example the November issue will look at "Education and Adjustment," while December will examine "Education and Intellectual Development."

These forthcoming issues, however, will not be "on the defensive." Rather, we will try to examine several of these serious misconceptions. We will also attempt to clarify some of the underlying principles involved both for the sake of the supporting society and for our own growth in understanding.

Themes for Volume 16—and for our first post-Sputnik year are these:

NOVEMBER: "Education and Adjustment"
DECEMBER: "Education and Intellectual Development"
JANUARY: "Appraising American Education"
FEBRUARY: "Curriculum Planning for Continuity in Learning"
MARCH: "Learning More About Learning"
APRIL: "Learning in Other Cultures"
MAY: "Supervision 1959."

New Publications. In recent weeks ASCD has released a new booklet by Edna Ambrose and Alice Miel entitled *Children's Social Learning: Implications of Research and Expert Study.* For release early in October are these:

Juvenile Delinquency: Research, Theory and Comment by Bernice Milburn Moore.

What Does Research Say About Arithmetic? (Revised Edition) by Vincent J. Glennon and C. W. Hunnicutt.

Personnel. We welcome O. L. Davis, Jr., who joined the ASCD headquarters staff in July as an associate secretary. Dr. Davis' assignment is to work with the committees and commissions of the Association and with service correspondence.

Also new on the headquarters staff are Penelope Reid (better known as Penny) whose stenographic assistance is most welcome, and Francis Cawley who is our "jack-of-all-trades" when he isn't at school. Mrs. Lounell Vonland has been assisting in the editorial section for some months now and is responsible for making the workings of that department much easier.

Those of you who came to know Dr. Gill's secretary, Evelyn Ford, during the hectic conference days will be interested to know that she is back in the office after having become the mother of a handsome young son named Kyran.

You were represented. All members of the ASCD professional staff attended the first meeting of presidents of the Association's affiliated units, June 7-10, in Washington, D. C.; also the first meeting of the national committee for the Association's Cooperative Action Program for Curriculum Improvement (CAPCI), July 5-6, in Cleveland, Ohio.

Rodney Tillman and your editor attended the Fourth Workshop of ASCD's Region III, August 8-10, on the campus of West Virginia University, in Morgantown.

Margaret Gill attended the July 24-26 meeting of the Ohio ASCD and also represented the Association at the first organized meeting of the new ASCD unit in Puerto Rico, August 6-16.

—ROBERT R. LEEPER, *editor,* EDUCATIONAL LEADERSHIP.

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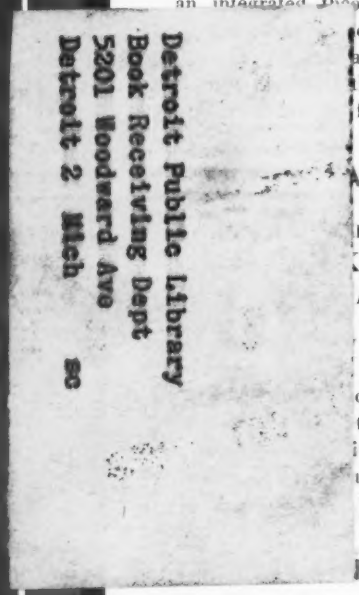

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